1985
1986

AGRICULTURE ANNUAL REPORT

Alberta
AGRICULTURE

87-02988/

1985
1986

AGRICULTURE ANNUAL REPORT

ALBERTA AGRICULTURE'S
ANNUAL REPORT
1985-86

TO HER HONOUR THE HONOURABLE HELEN HUNLEY
Lieutenant-Governor of the Province of Alberta

Madam:

We have the honor to submit the annual report of Alberta Agriculture for the fiscal year ended March 31, 1986.

Respectfully submitted,

PETER ELZINGA
Minister of Agriculture

SHIRLEY CRIPPS
Associate Minister of Agriculture

ALBERTA AGRICULTURE'S
ANNUAL REPORT
1985-86

HONOURABLE PETER ELZINGA
Minister of Agriculture

HONOURABLE SHIRLEY CRIPPS
Associate Minister of Agriculture

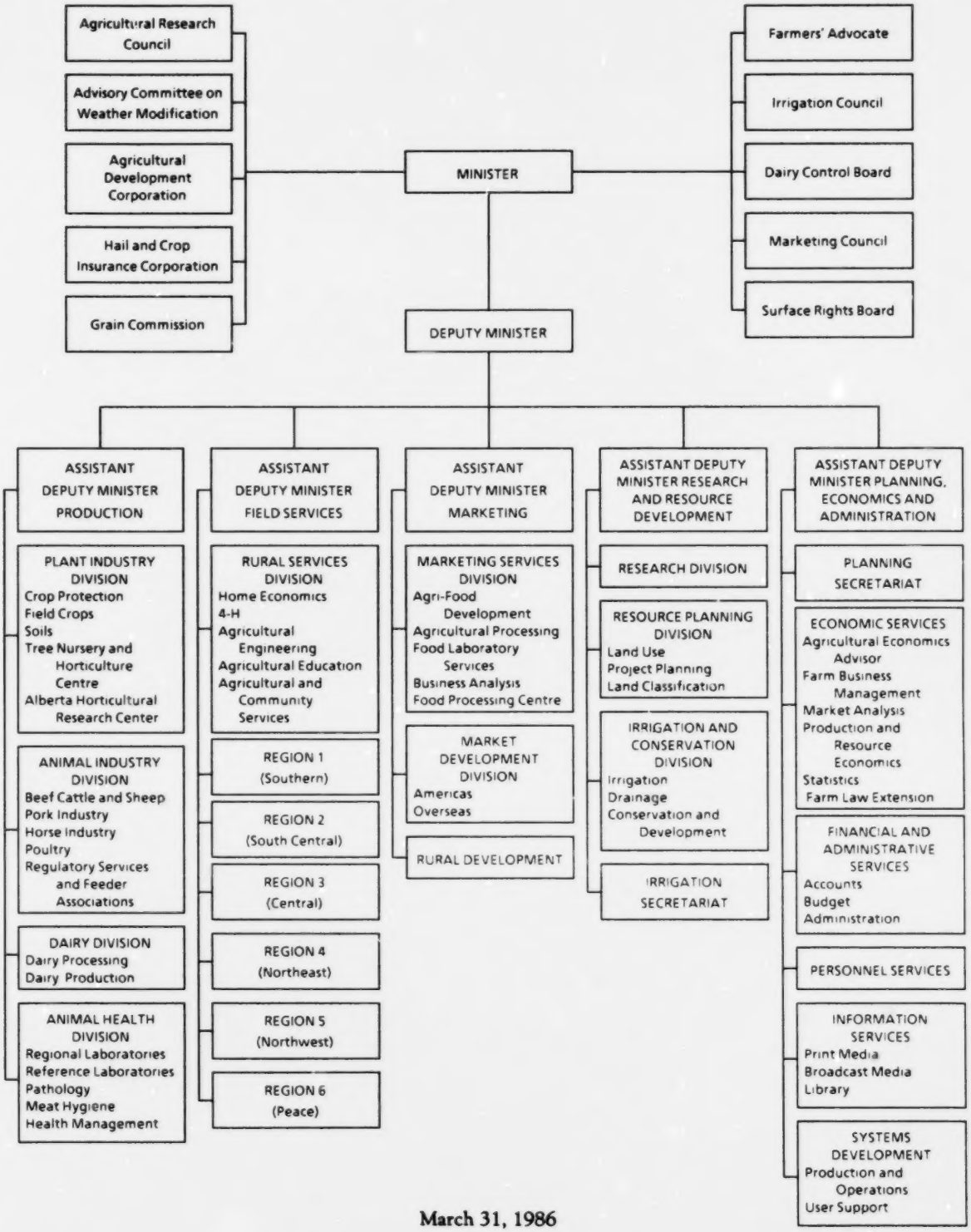
Sir and Madam:

I have the honor to submit the annual report of Alberta Agriculture for the fiscal year ended March 31, 1986.

Respectfully submitted,

H.B. McEwen
Deputy Minister

ORGANIZATIONAL CHART



March 31, 1986

HIGHLIGHTS

- The conservation and development branch achieved a doubling of soil and water conservation projects undertaken by agricultural service boards.
- The department received an international award for the conservation awareness film *A Matter of Soil.*
- The irrigation rehabilitation and expansion program began its second five-year mandate. The $150 million program, a project of the Alberta Heritage Savings Trust Fund, spent $29.8 million during the year.
- Farming for the Future provided financial support totalling more than $5.1 million to 103 agricultural research projects and 117 on-farm demonstration projects. In total, the research division administered more than 300 research and development projects.
- The province's weather modification research program completed the last year of its five-year mandate.
- In response to concern about the effects of over-regulation on small grain dealers, the Alberta Grain Commission developed and implemented the small grain dealers guarantee program.
- The Planning Secretariat made a presentation to the Grain Transportation Agency regarding review of The Western Grain Transportation Act, conducted a farm survey on the Crow rate issue, participated in the ongoing Crow strategy discussions, and reviewed the report of the federal Committee of Inquiry on the Crow Benefit Payment.
- The Alberta feed grain market adjustment program was implemented to offset the distortion in feed grain prices which livestock producers face as a result of the current method of paying the Crow benefit.
- A producer survey to establish farmers' level of acceptance of Alberta's feed grain marketing system was undertaken.
- "Computers on Wheels", a co-operative project involving IBM Canada Ltd., the University of Alberta and Alberta Agriculture, provided a basic understanding of computers and their use on the farm to 636 participants across Alberta.
- In co-operation with Atmospheric Environment Services of Environment Canada, Alberta Agriculture initiated a pilot agricultural phone-in weather forecast service in several centres across the province.
- The Canada- Alberta livestock drought assistance program and the Alberta livestock assistance program were initiated in response to the severe drought.
- The farm fertilizer price protection plan was implemented to assist Alberta farmers reduce their crop production costs.
- The interim red meat stabilization plan was implemented to assist red meat producers until a tripartite red meat assistance program came into effect. The tripartite red meat stabilization program, an income support program, was established to assist red meat producers.
- The Her Majesty Queen Elizabeth the Queen Mother Scholarship was established as a gift to the Queen Mother in recognition of her visit to Alberta.
- Thirty-one "Gear Up Financially" courses were offered across the province and attended by 414 farm families.
- The Alberta Farm Safety Program received international recognition for its 1985 edition of *A Child's Guide to Farm Safety* which was based on a unique computer format.
- A study of Alberta farm family living expenditures, FAMEX, was initiated in January, 1986.
- The Canada-Alberta Agricultural Processing and Marketing Agreement was signed. The agreement is a jointly administered $50 million, five-year incentive program for food and agriculture value-adding, marketing and research.
- Protocols were signed with the Soviet Union regarding the development of trade in dairy genetics, canola production and wheat production.
- Over 120 Alberta companies undertook project work at the Food Processing Development Centre.
- Value-added marketing efforts were expanded as both meat and dairy companies increased their export activities.

TABLE OF CONTENTS

Weather Modification 1
Agricultural Development Corporation 1
Alberta Hail and Crop Insurance Corporation 2
Alberta Grain Commission 4
Farmers' Advocate 5
Alberta Dairy Control Board 5
Surface Rights Board 6
Agricultural Products Marketing Council 6

PLANNING, ECONOMICS AND ADMINISTRATION
Planning secretariat 11
Economic services division 12
- Farm business management branch 12
- Market analysis branch 14
- Production and resource economics branch 14
- Agricultural economics advisor 15
- Statistics branch 16
- Agricultural law program 16

Financial and administrative services 18
Personnel services 22
Information services 24
- Broadcast media branch 24
- Print media branch 24
- Library services branch 25

Systems development 26

PRODUCTION
Plant industry division 29
- Field crops branch 29
- Crop protection branch 29
- Soils branch 31
- Alberta Tree Nursery and Horticulture Centre 31
- Alberta Horticultural Research Center 31

Animal industry division 32
- Regulatory service and feeder associations branch 32
- Poultry branch 33
- Pork industry branch 35
- Red meat stabilization 36
- Horse industry branch 37
- Beef cattle and sheep branch 37

Dairy division 40
- Dairy production branch 40
- Dairy processing branch 41

Animal health division 42
- Meat hygiene branch 43
- Livestock predator and beeyard compensation programs 43
- Health management branch 43
- Regional laboratories branch 45
- Reference laboratories branch 45
- Pathology branch 46

FIELD SERVICES

Rural services division 49
Home economics branch 50
4-H branch 51
Agricultural engineering branch 55
Agricultural education branch 55
Agricultural and community services branch 57
Region 1 - Lethbridge 59
Region 2 - Airdrie 62
Region 3 - Red Deer 65
Region 4 - Vermilion 68
Region 5 - Barrhead 70
Region 6 - Fairview 73

MARKETING

Marketing services division 79
Agri-food development branch 79
Food Processing Development Centre 80
Business analysis branch 81
Agricultural processing development branch 82
Food laboratory services branch 83
Market development division 86
Rural development 90

RESEARCH AND RESOURCE DEVELOPMENT

Research division 95
Farming for the Future 96
Resource planning division 97
Land use branch 98
Land classification branch 98
Project planning branch 99
Irrigation and conservation division 100
Conservation and development branch 101
Irrigation branch 102
Drainage branch 104
Irrigation secretariat 106

APPENDIX

Acts administered by Alberta Agriculture 109
Wheat Board Money Trust Account 111

1985-86 ANNUAL REPORT

WEATHER MODIFICATION

Alberta's weather modification research program completed its five-year mandate in 1985-86. The program was supported by Alberta Agriculture and operated by the Alberta Research Council, with general direction from the weather modification advisory committee.

Weather modification data gathered during the program's five-year term will be compiled and published in a final report.

During the year, the prinicipal objectives of the program were to assess the technical and economic feasibility of hail suppression, rainfall management and snowfall augmentation, and to develop an experimental design for assessing the economics of weather modification in general.

In 1985-86 the principal target area of the Alberta hail project centered on the radar site located at the Red Deer Industrial Airport. Hail suppression cloud seeding operations were conducted in this area from June 20 until August 30.

Drought conditions experienced in Alberta during the 1985-86 project period had an adverse effect on hail studies. In the southern half of the experimental region, between Red Deer and Calgary, only 40 per cent of the normal number of hail reports were received. In the northern half, between Red Deer and Edmonton, hail reports were 85 per cent of normal. In total, hail was reported on 33 days in the project area during the operational period. As a result of the lower than average hail storm frequency, fewer operations were conducted than had been in previous years.

In addition to the hail suppression operations, 42 experiments were conducted by the weather modification research program on the production of rain through cloud seeding. Results of these experiments will be used to assess the potential for increasing rainfall in Alberta's dry areas.

Aircraft were again contracted for use in the hail research and cloud seeding programs in 1985-86. Six aircraft were employed in all: four operational seeders, one research seeder and a cloud physics research aircraft.

Also conducted in 1985-86 was a study to determine the effectiveness of ground-based generator seeding. This work was carried out between July 1 and July 28 in the ground generator study area south of Calgary.

During the year, the weather modification advisory committee met monthly with representatives of the atmospheric sciences department of the Alberta Research Council to make recommendations concerning the weather modification program, and to monitor its progress.

AGRICULTURAL DEVELOPMENT CORPORATION[1]

The Agricultural Development Corporation (ADC) was established by the Agricultural Development Act (1972) to provide financial assistance to farmers and agricultural processors in the province. Accumulated loan authorizations during the 14 years from June 1972 to March 1986, amounted to 114,652 loans totalling $2,513,000,000. Of these numbers, 25,410 loans totalling $1,209,700,000 were active and outstanding at March 31, 1986.

During 1985-86, ADC continued to provide financial assistance to agricultural enterprises through direct loan financing on a long term basis, and by means of extensive loan guarantee programs through other lenders to cover short and intermediate term financing. Direct farm lending during the year totalled $91.4 million compared with $116.6 million in 1984-85, and reflected the uncertain economic conditions which continued to prevail. Of the total direct farm loans authorized in 1985-86, loans made to beginning farmers amounted to $89.1 million, with the majority of these new entrants taking advantage of the staged option feature of the beginning farmer program. Other direct farm loans during the year amounted to $2.3 million compared with $7.5 million in the previous year. The 831 direct farm loans made in 1985-86 averaged $110,000, compared with an average of nearly $120,000 for loans made in the previous year. This reduction reflected the preponderance of beginning farmer loans and the greater use being made of the staged option.

[1]*Agricultural Development Corporation publishes a statutory annual report which provides more detailed information than that given in this section.*

In 1985-86, a total of $87.1 million in short and intermediate term credit was made available to primary producers by other lenders under ADC's Alberta farm development loan guarantee program. Several changes to this program were introduced during the year to accommodate the needs of Alberta farmers. A further $2.3 million was approved for Alberta farmers as specific guarantees, while an additional $3.8 million was authorized for farm development guarantees under a new program which provides additional access to operating funds through commercial lenders for farmers who do not qualify under normal commercial lending criteria. Under these various guaranteed programs, loans were approved for nearly 6,000 primary producers.

ADC approved over $40 million in incentives during 1985-86. The great majority of these incentives represented interest reductions to beginning farmers, but also included were incentives paid to producers in specific sectors of primary agriculture.

To March 31, 1986, a total of 362 counselling assignments were undertaken under the new enterprise counselling services program. The work done by these enterprise counsellors was of considerable assistance to farmers experiencing financial difficulty.

ADC field staff were very active during the year providing advice and counselling services to farm clients. During 1985-86, a total of 57,922 field office interviews were conducted, and 6,128 farm visits made.

ADC continued to provide financial assistance to secondary processing and agricultural service businesses throughout the province. Total direct and guaranteed loans plus letters of credit to agribusiness during 1985-86 amounted to $43.1 million. Increased emphasis continued to be placed on agribusiness account monitoring and administration of existing loans.

The corporation's preferred interest rates remained unchanged during 1985-86. However, during the year, an interest reduction of three percentage points was approved on the first $500,000 of existing agribusiness loans. Also, effective April 1, 1986, the preferred farm lending rate was reduced to 9 per cent, with beginning farmers to receive an interest incentive of three percentage points for the first five years of the loan.

ALBERTA HAIL AND CROP INSURANCE CORPORATION[1]

The Alberta Hail and Crop Insurance Corporation continued to provide Alberta farmers with the opportunity of protecting grain and many of the specialty crops from unavoidable loss caused by natural perils. In doing so, it contributed to the economic stability of farmers and the agricultural community.

The hail insurance program provided protection against the single hazard of hail and the all-risk insurance program gave participating farmers a production guarantee and protection against major loss as a result of all natural hazards. The corporation also administered the wildlife damage compensation fund for public lands and wildlife.

Hail Insurance

The volume of hail insurance carried by Alberta farmers in 1985 dropped slightly from the previous year, largely as a result of the dry spring and poorer crop conditions. The dry weather continued throughout the summer and this was accompanied by a reduction in hail damage to a level well below normal.

Following is a summary of business and losses for 1985, with comparative figures for 1984.

[1]*Alberta Hail and Crop Insurance Corporation publishes a statutory annual report which provides more detailed information than that given in this section.*

SUMMARY OF HAIL INSURANCE PROGRAM

	1985	1984
Policies	9,194	9,848
Acres insured	3,301,495	3,388,987
Risk	$243,298,203	$247,094,724
Premium	$ 16,287,456	$ 16,196,285
Indemnities	$ 7,384,560	$ 15,265,005
Loss-to-premium ratio	45.15%	94.25%

Because of the favorable loss experience, the corporation was able to pay a premium refund on 1985 business of 15 per cent to non-claimants and 10 per cent to those with claims. The premium refund totalled $3,601,641. The corporation wrote approximately two-thirds of all hail insurance carried by Alberta farmers, the balance being placed with private companies.

All-Risk Crop Insurance Program

All-risk crop insurance was a joint program of the governments of Alberta and Canada, administered by the Alberta Hail and Crop Insurance Corporation. The province paid all administrative costs, while the federal government contributed one-half of total premiums. The remaining one-half of premiums was charged to farmers, with the province picking up a portion of the farmers' share under its high-risk subsidy program.

1985 was a disastrous year for farmers over wide sections of the province, mainly as a result of the most serious drought conditions since the 1930s, coupled with heavy damage from grasshoppers and cutworms, wind erosion, early frost, a wet harvest season and the unusually early onset of winter. Volume of business under the all-risk crop insurance program was at an all-time high, as were the numbers of claims filed and indemnities paid for crop losses.

About 2,500 of the 23,433 farmers were unable to complete harvest in the fall of 1985 and settlement of their claims had to be deferred until the spring of 1986. Advances were paid on snowed under crops where over 20 per cent of the insured acreage remained unharvested or it was evident there would be a payable loss when the claim was finalized.

Following is a comparative summary of business for 1985 and 1984, excluding the hay and pasture program.

SUMMARY OF ALL-RISK INSURANCE PROGRAM

	1984	1985
Policies	23,822	22,299
Acres insured	10,838,049	9,355,178
Hives insured	97,437	102,790
Hail endorsement coverage	$762,010,494	$666,562,737
Premium	$118,325,628	$ 98,007,019
Indemnities		
Basic policy	$212,098,992*	$163,609,446
Hail endorsement	47,221,707	41,127,338
Total	$259,320,699*	$204,736,784

* *Preliminary*

Two programs were implemented by the department as a result of the extreme drought and heavy crop losses in 1984 and 1985. The programs were not part of the crop insurance program but were tied closely to it and were administered by the corporation.

Under the coverage restoration program, the adjusted coverage levels of policyholders whose coverage had been reduced because of claims in 1984 or 1985, were restored to the levels in effect at the beginning of 1984. Payments made under this program totalled just over $24,250,000.

The second program, the temporary revised guideline program, encouraged policyholders to cut insured crops for feed and was intended to ease the impending critical livestock feed shortage. Payments made under this program slightly exceeded $13,250,000.

Hay and Pasture Insurance

Extreme drought affected all areas in which the hay and pasture insurance program was offered in 1985. As a result, all of the 1,135 policyholders qualified for indemnities under the program. Following is a comparative summary of business for 1985 and 1984.

SUMMARY OF HAY AND PASTURE INSURANCE

	1985	1984
Policies	1,135	1,107
Acres insured	221,223	196,752
Risk	$13,410,060	$11,040,575
Premium	$ 1,768,569	$ 1,523,535
Indemnities	$7,444,301	3,862,309
Loss-to-premium ratio	420.92%	253.51%

ALBERTA GRAIN COMMISSION

The activities of the Alberta Grain Commission during 1985-86 were enhanced by the appointment of a new chairman and two new commissioners.

The commission continued its interest in opportunities that may exist for alternative grain marketing strategies. In 1985-86 the commission pursued some of these alternatives by participating in a feed grain survey of Alberta producers. In addition to alternatives for feed grains, the commission also maintained an interest in wheat and canola marketing. Of particular interest were the interrelationships between export and domestic marketers of grains. The diversity of the domestic marketplace offered opportunities for discussions with brewers, maltsters, millers and crushers.

The Alberta Grain Commission continued to maintain a close liaison with a number of industry participants over the past year. It worked closely with federal agencies, including the Canadian Wheat Board and Canadian Grain Commission, on such issues as grain dealer licensing and the role of the domestic processor. Ties with industry in the Pacific Northwest of the United States were strengthened through discussions on growing and processing canola in that region. The Alberta Grain Commission was also a major participant in the Grain Marketing Summit held in Lake Louise, Alberta in January. The summit brought together major grain industry representatives for two days of intensive discussion on a number of vital topics.

In response to concern about the effects of over-regulation on small grain dealers, the commission developed and implemented the small grain dealers guarantee program. This program was designed to insure that small dealers remain in business and are able to operate in a normal commercial manner without adversely affecting their ability to provide security to farmers who may wish to deliver to them.

The Alberta Grain Commission was involved in the review of Alberta hail and crop insurance, the method of payment of the Crow benefit and other issues relating to transportation and marketing of grain. The commission also continued to operate its toll-free grain price information line and published two weekly reports concerning west coast traffic and the reported feed grain prices for Alberta feed mills.

FARMERS' ADVOCATE OF ALBERTA[1]

The Farmers' Advocate of Alberta reviewed a variety of enquiries and concerns on behalf of the agricultural community. A comprehensive annual report issued by the Farmers' Advocate office is available through the Minister of Agriculture or directly from the Farmers' Advocate of Alberta.

ALBERTA DAIRY CONTROL BOARD

The Dairy Board, operating under The Dairy Board Act, met its responsibilities in the administration of fluid milk, industrial milk and cream sectors. These responsibilities included the licensing of dairy producers, processors and distributors of fluid products; setting and adjusting fluid milk quotas; regulating time and payment to producers; and in general governing the sale of milk in Alberta.

The board was responsible for the operation of the Alberta milk market sharing plan, an industrial milk plan entered into by federal and provincial authorities. The board was a member of the Canadian milk supply management committee, a body responsible for the development of the national dairy policy.

The number of active dairy producers — fluid milk, industrial milk and cream — as of March 31, 1986, totalled 2,537. Total provincial production was down by 3.77 per cent from the previous fiscal year. Fluid milk production decreased by 2.29 per cent, industrial milk production decreased by 11.48 per cent and cream production decreased by 17.91 per cent. Fluid milk sales increased by 1.5 per cent from the previous year.

The board operated a fluid milk equalization pool for Alberta fluid milk producers. This plan successfully completed its 10th year of operation and enabled producers to share in the sale of fluid milk returns regardless of location or source of sales.

No additional producers were accepted under the graduated entry program. A total of 930 industrial producers have entered the fluid sector since the start of the graduated entry program in 1975.

Producers' financial returns for fluid milk, industrial milk and farm separated cream advanced at intervals during the year. Fluid milk prices increased $0.98 per hectolitre on September 15, 1985 ending the year at $51.07 per hectolitre. Industrial milk advanced $1.03 per hectolitre August 16, 1985 ending the fiscal year at $38.88 per hectolitre. Churning cream prices also increased on August 16, 1985.

Board staff maintained an audit program of all fluid processors together with inspections to maintain and ensure compliance with regulations issued under the authority of The Alberta Dairy Board Act.

[1] *A more detailed and comprehensive annual report issued by the Farmers' Advocate's office is available through the Minister of Agriculture or directly from the Farmers' Advocate.*

SURFACE RIGHTS BOARD[1]

The Surface Rights Board, a quasi-judicial board established under The Surface Rights Act, granted operators the right to enter on and use the surface of land for mineral recovery operations and for the construction and operation of power transmission lines, pipelines and telephone lines, where the operator had been unable to acquire the necessary right by consent of the owner or occupant of that land; and held hearings, in those cases where a private agreement could not be reached, to determine the compensation payable by the operator and the person entitled to receive the compensation.

The board held hearings with respect to damage disputes and requests for review of annual compensation under board compensation orders and surface leases.

The board issued written decisions to the parties concerned as required by The Administrative Procedures Act in all cases where a hearing was held and a decision required. The board issued orders granting right of entry, terminating right of entry, fixing compensation, amending or varying compensation on reviews, and various incidental orders, and continued to assist in the recovery of money owed by an operator to any person under board orders or surface leases.

The Expropriation Act was administered by the board with respect to expropriation of land authorized under or pursuant to section 31 of The Water Resources Act and The Hydro and Electric Energy Act.

AGRICULTURAL PRODUCTS MARKETING COUNCIL

The council was responsible for the administration of The Marketing of Agricultural Products Act. Pursuant to the Act, the council facilitated the establishment and supervised the operation of producer marketing boards and commissions. Eight marketing boards and three commissions operated under the Act: Alberta Chicken Producers' Marketing Board, Alberta Cattle Commission, Alberta Egg and Fowl Marketing Board, Alberta Hatching Egg Marketing Board, Alberta Pork Producers' Marketing Board, Alberta Potato Commission, Alberta Sheep and Wool Commission, Alberta Sugar Beet Growers' Marketing Board, Alberta Turkey Growers' Marketing Board, Alberta Fresh Vegetable Marketing Board and Alberta Vegetable Growers' Marketing Board.

The role of Alberta's marketing boards and commissions became more prominent as producers increasingly viewed these organizations as a means of improving their economic well-being in light of current economic conditions.

The Alberta Chicken Producers' Marketing Board continued their agreement with the Canadian Chicken Marketing Agency whereby Alberta chicken producers were committed to maintaining chicken production within specified limits for 1985 while not formally becoming a participant in the agency. The Canadian Chicken Marketing Agency, which has jurisdiction in the rest of Canada, sets provincial quota allocations for the other provinces.

The Alberta Cattle Commission continued to spend considerable amounts of time and effort in discussing and analysing the pros and cons of a national red meat

[1]*The Surface Rights Board presents a detailed annual report to the Minister of Agriculture each year.*

stabilization proposal.

Despite the efforts of the Alberta Egg and Fowl Marketing Board, the production of commercial eggs in Alberta continued to be restricted at levels significantly below market requirements owing to the inability of the Canadian Egg Marketing Agency to develop an acceptable policy for the distribution of egg marketing quota among the provinces.

The Alberta Hatching Egg Marketing Board experienced a relatively stable year with a continued increase in flock productivity. The board also became heavily involved in discussing the merits of joining a national hatching egg marketing agency.

The Alberta Pork Producers' Marketing Board continued to function as a compulsory central selling agency in the marketing of hogs to processing plants.

Potato producers continued to review the establishment of a marketing board as a means of rectifying the industry's marketing problems. The Alberta Potato Commission carried on with its promotional and research activities on behalf of producers.

The Alberta Sheep and Wool Commission continued to direct its activities toward expanding the province's sheep industry.

The Alberta Sugar Beet Growers' Marketing Board, established in the fall of 1983, received authority during 1985 to negotiate producer contracts and to establish a system of quotas. A breakdown in negotiations between the board and its sole processor resulted in no sugar beets being grown during the year.

Turkey production in Alberta continued to experience pressure as a result of restricted quotas set by the Canadian Turkey Marketing Agency. The Alberta Turkey Growers' Marketing Board participated in this agency which sets quotas for provincial turkey production.

The Alberta Fresh Vegetable Marketing Board regained some financial stability during the year, after a year in which severe crop losses placed considerable financial pressure on the board.

The Alberta Vegetable Growers' Marketing Board continued its efforts to expand the vegetable industry.

Council provided assistance to many grower associations and a number of other commodity groups which were assessing the possibility of utilizing the marketing legislation.

A major aspect of council's workload during the year was serving as arbiter for disputes within the industry. Council heard six appeals between a processor and the Alberta Pork Producers' Marketing Board.

Council continued to advise marketing boards and commissions under its supervision of their responsibility not only to producers but to other sectors of the industry and the public.

1985
1986

PLANNING, ECONOMICS AND ADMINISTRATION

PLANNING, ECONOMICS AND ADMINISTRATION

The planning, economics and administration sector was organized and staffed to serve the following purposes:

- to provide effective and appropriate administrative and support services consistent with governmental and department policies to the Minister and departmental staff.
- to provide to the public a full range of economic and planning services that will contribute to a viable agricultural community.

Consistent with such purposes a number of specific objectives have been enunciated:

- to ensure the department's internal and external communication needs are effectively met in making the agricultural community better informed.
- to ensure the provision of a complete range of up-to-date applied agricultural economic services that will contribute to a viable agricultural industry.
- to provide co-ordination for applied agricultural economics in the department.
- to ensure the department effectively manages and controls revenue and expenditures in compliance with The Financial Administration Act.
- to provide effective personnel administration support services to assist the staff of Alberta Agriculture in achieving their objectives.
- to effectively meet the needs of the department for strategic planning, program planning, evaluation, policy analysis and policy development.
- to provide appropriate and timely service for space, telephones, vehicles, legislative and legal needs, records management, library and electronic data processing to the department in an economical way consistent with central agency guidelines.

PLANNING SECRETARIAT

The Planning Secretariat continued to play an important role in the establishment and evaluation of agricultural programs and policies in 1985-86.

Grain transportation was a primary focus during the year. Secretariat activities included a presentation to the Grain Transportation Agency regarding review of The Western Grain Transportation Act, a farm survey on the Crow rate issue, continued participation in the ongoing Crow strategy discussions, and review of the report of the federal Committee of Inquiry on the Crow Benefit Payment. The secretariat also made submissions and provided consultative services on grain transportation issues such as the method of payment of the Crow Benefit.

Feed grain marketing policy continued to be assessed in 1985-86. The secretariat undertook a producer survey to establish farmers' level of acceptance of various features of Alberta's feed grain marketing system. It also played a key role in designing and implementation of the Alberta feed grain market adjustment program. Since the program began, the secretariat has monitored its effectiveness in relation to both departmental and program objectives.

Efforts continued toward developing a new national feed grain policy.

The effectiveness of our canola marketing system was also examined. An extensive study concentrated on the price efficiency of the market and the market's ability to offset the risks inherent in crushing and exporting canola, canola meal and oil. Farmers and crushing industry representatives directed the development of the study.

Farm finance was scrutinized in 1985-86. The secretariat co-operated on the Federal/Provincial Working Group on Farm Finance and assessed the financial situation in Alberta. Participation in an ongoing equity finance review constitutes part of the secretariat's efforts in this area.

In early 1986 a comprehensive review of the Canada/Alberta crop insurance program was begun. Secretariat staff formed part of the team responsible for the development and management of the review process.

Technical support was provided for the development of Alberta's policies in the national red meat stabilization

program and assistance was extended to the meat packing and processing sector.

The secretariat performed administrative support functions for divisions and committees within Alberta Agriculture. For example, a secretariat member participated on the board of directors of the Alberta Agricultural Development Corporation. Members also helped organize and evaluate a major department-sponsored conference on farming in the 21st century. As part of their day-to-day activities, secretariat staff prepared briefings that addressed a variety of agricultural issues in support of departmental and ministerial requirements.

Terms of reference were established and planning activities were undertaken regarding the department's strategic plan for information services. Work also continued on an analysis of the information needs of Alberta Agriculture's farm clients. In 1985-86, the study focused on business management and home management/family relationships. The information from this study will be used to create guidelines for program planning priorities.

The secretariat continued liaison between Alberta Agriculture and native agricultural development programs. It also helped, facilitate and evaluate a first-time province-wide farm women's conference.

ECONOMIC SERVICES DIVISION

The economic services division continued to put a high priority on financial, taxation, marketing and research issues related to agriculture. Increased emphasis was directed towards trade issues in the areas of the impact of the Canada/United States Trade Agreement and industry perspectives on the General Agreement on Tariffs and Trade (GATT) on multilateral trade negotiations. Legal and business advisory services for the farming community were maintained.

The division continued to provide applied economic services in commodity marketing and extension, production cost research, resource use research, and agricultural statistics. These services were provided to farmers, government departments and agencies, farm organizations and the private sector servicing the agricultural industry.

Farm Business Management Branch

The farm business management branch continued to develop and adapt farm management technology for use by farm families in making business decisions.

To meet the financial management demands for ever-changing economic conditions, 430 farm families participated in 31 "Gear Up Financially" courses across the province. These 10 12-day intensive courses were taught by instruction teams of consultants, district home economists and district agriculturists. The courses were part of a four-year financial management initiatives program. Preliminary evaluation indicated participants rated the courses very highly and emphasized the benefits of farm financial statements. As well, 247 farm families took part in the in-depth consultation portion of this program. Fifty consultants continued this service as needed. The farm accounting assistance part of this program was prepared for delivery in the fall of 1986. The three components of the program are supervised by a provincial co-ordinator working in the branch.

As part of a co-operative project with IBM Canada Ltd., the University of Alberta and Alberta Agriculture, 636 participants were involved in the "Computers on Wheels" project (68 courses, 47 locations). These courses provided a basic understanding of computers and how they can be used on the farm. Under the terms

of the three year agreement, IBM donated 22 portable personal computers. The engineering branch and farm business management branch each provided one van and one instructor, developed the curriculum and promoted the courses.

The dissemination of information continued to improve through 70 *Agri-News* press releases, and over 20 radio and television interviews. There were 140 client office appointments relating to computers, estate planning, tax issues, credit application, financial management, accounting and business arrangements, and over 65 presentations at meetings, trade fairs, and seminars. New factsheets were prepared and 120 other publications were kept up-to-date for farm clients. Staff assisted in the development of 13 feature articles that appeared in the *Country Guide, Alberta Farm and Ranch, Western Producer,* and *Grainews.*

After a year's interruption 13,000 *Save All Management Planning Pouch Calendars* were made available with the support of private industry.

The ninth "Managing Agricultural Technology For Profit" (MATFP) conference was held for the second time at Chateau Lake Louise. Attendance was 312. Fees were reduced to recognize the reduced incomes of farmers.

The farm planning section continued development of guidelines for machinery selection, replacement, financing and use. This section continued to develop expertise in dairy economics, prepared case studies and continued to contribute to the dairy producer's homestudy course, as well as maintained liaison with the dairy division. Nine farm planning worksheets were developed for use in the financial management initiatives program, and three lessons were prepared for "Gear Up Financially" courses.

This section continued to advise farmers on custom rates: 9,000 copies of the third issue of the *Directory of Custom Operators in Alberta* were distributed; 8,000 copies of the *Custom Rates Annual Survey Summary,* and 12,000 copies of *Farm Machinery Costs as a Guide of Custom Rates.*

The financial management section continued to review tax legislation, providing comments and input into the development of Alberta's position on current tax issues and agricultural credit issues. The section continued to maintain liaison with Revenue Canada accountants and lawyers. Staff worked on the farm estate planning homestudy course — preparing chapter three and reviewing the rest of the chapters. The Financial Fitness Package was updated for the financial management initiatives program, and a curriculum was develop for the "Gear Up Financially" courses.

Staff updated the printed 6,000 copies of *Sources of Farm Business Credit Available in Alberta,* and printed 96,000 copies of *Assistance Available for Alberta Farmers* which was distributed as a supplement to *Farm Light and Power.* Over 10,500 financial record books, *Income and Expense Basic Records for Alberta Farmers* and *Prairie Provinces Farm Account Book,* were distributed. The income and expenses book was revised to meet current financial management needs. Twelve thousand copies of *Tax Management Strategies for Alberta Farms* were prepared jointly with Deloitte, Haskins, & Sells.

Four one-day seminars with an attendance of 286 were held to update accountants and lawyers on farm taxation and estate planning. In addition 76 course manuals were sold.

The Farm Employment Records and Forms publication, plus supporting courses were jointly prepared with Deloitte, Haskins & Sells.

The branch organized the Sixth Agricultural Workshop for Lenders in co-operation with Olds College and lenders' agricultural departments; 75 attended.

The management technology section continued to publish the *Compu-Farm* (now a registered trademark in Canada) monthly newsletter with 2960 subscribers. The section prepared users manuals for department microcomputers, answered queries (over 750 phone calls), and set up and maintained microcomputers for the "Computer on Wheels" and "Gear Up Financially" courses. They also developed worksheets for Gear Up Financially courses, and continued to distribute Alberta Agriculture software for different brands of microcomputers. These programs and other information were also provided through a remote bulletin board. The section printed two updates of the *Agricultural Software Directory* which consisted of 550 different software products from 120 manufacturers. Staff conducted a farm accounting survey and published the results in the *Compu-Farm* newletter.

This section, with the engineering branch, organized the fourth annual Agro-Electronics Show held in

conjunction with the Smoky River Agricultural Trade Fair in Falher, Alberta.

Market Analysis Branch

The market analysis branch provided farmers and other members of the agricultural sector with timely and pertinent market-related information on which to base production and marketing decisions.

The branch continued to monitor and analyse agricultural commodity and product markets, to prepare market situation and outlook reports, to interpret policy and other developments related to agricultural markets, to offer marketing extension courses and to provide market news and information.

Comprehensive reports on market prospects for the major farm commodities produced in the province were made available directly to over 4,000 farmers, members of the legislature and the media. Continued emphasis was placed on distributing market analysis and outlook information through commodity association newsletters such as the *Canola Digest*, *The Western Barley Grower*, *The Alberta Cattlemen*, *Forage Seed Notes*, *NuKrop News* and through the media in general. Specific situation and outlook reports were prepared at the request of both in-house and outside clients.

The branch continued its extension program which provided farmers with a more thorough understanding of the functioning of the market, and information on innovative marketing techniques. A new publication *Farming the Markets* was introduced and distributed on a limited basis.

The branch worked closely with field services staff and farm organizations in extending its programs. Branch staff played a major role in organizing the "Second Century — Opportunities for Agriculture" conference held in Edmonton in November 1985. The provincial grain and livestock outlook conferences were combined as "Accent '86 — Taking Stock" and held in Calgary in March 1986.

The branch also disseminated market news and short-term analysis through *The Weekly Livestock Market Review* and *The Weekly Market Grains and Oilseeds Review*. This was mailed to about 9,000 producers and industry clients and distributed electronically through GRASSROOTS and internally through the department's 5520 system. The monthly *Livestock Slaughter Summary* and the *Weekly Livestock and Grain Market Charts* were published to supplement the regular market news publications of the branch. A computerized agricultural market data base, AGDATA, was maintained to facilitate internal research activities and for public use. The branch also worked closely with the Alberta Cattle Commission on its program for the collection and dissemination of cattle market news.

Production & Resource Economics Branch

The production and resource economics branch continued to provide farmers in particular and the agricultural sector in general with timely information on the economics of production, and resource development and use in Alberta. The production section increased its emphasis on crop and livestock case studies, while the resource section directed most of its effort at completing the financial analysis of the interdepartmental agricultural land base study (ALBS).

The production section completed the first year of a three-year study of the economics of cow-calf production in Alberta. The results showed that 1984 was a very unprofitable year for cow-calf producers in Alberta. Losses were estimated at $238 per cow.

The joint 1984 crop-cow-calf case study in regions 4 and 5 also showed significant losses for cow-calf producers. Field survey work for the 1985 production year is in progress. Three regions are now involved, regions 3, 6, and 5, with 42 producers participating.

The branch continued to monitor the fluid milk production costs for the Public Utilities Board (PUB) and assisted the board in establishing monthly fluid milk prices. The 1985 annual dairy economics study showed that fluid milk production costs in Alberta increased marginally over 1984 by 4.3 per cent. However, average producer returns to equity (or profit) slightly declined from 12.9 per cent in 1984 to 11 per cent in 1985.

The production section monitored the performance of sheep and hog production returns and costs in the

province. The 1984 results showed a slight improvement over 1983 for high management sheep producers.

Estimated provincial production costs for a 100 sow farrow-finish enterprise fell by 2 per cent in 1985

At the request of the Alberta Egg Producers' Marketing Board and the Alberta Turkey Marketing Board, two studies were completed to determine the economics of turkey and egg production in 1984.

Thirty per cent of the heavy turkey producers and 50 per cent of the light turkey producers in Alberta participated in a 1984 cost of production study.

Six consensus research data reports (CRD's) were published and distributed to producers and agribusiness. These economic reports provided information on machinery requirements for particular farms, and expected receipts and expenditures for different crops, livestock and farming systems in Alberta.

Over 125 producers from all six regions of the province participated in the 1985 dryland crop case study. The main objectives of this exercise were to provide participants and field staff with the most timely information to assist producers in planning cropping activities to make production-related decisions, particularly in use of inputs.

Eighty-one producers from regions 1 and 2 participated in an irrigation crop case study.

A report was published on the economics of production and marketing of greenhouse crops in Alberta

The branch continued to provide its clients with transportation costs, policy developments and freight rate changes for a wide variety of agricultural commodities transported by rail, truck and air. Changes in rail and truck freight rates and policy announcements affecting agricultural commodities were reported in the quarterly newsletter, *Agriculture Transportation*, published by the branch.

A special information package on the "Transportation of Dangerous Goods Regulations" was prepared for the field staff. The branch also published a report on *Trucking in the Changing Grain Industry (Phase I)*, an inter-departmental project involving Alberta Economic Development and Alberta Transportation.

Work continued on the joint study with the Alberta Wheat Pool to determine "Farm Trucking Costs for Hauling Grain and Grain Delivery Patterns".

Several production staff were involved in various free trade committees developing background information for the department. Staff also evaluated/analysed and provided comments to Alberta Manpower on immigration related entrepreneurial proposals. Cost and returns data for cow-calf farms were presented to Revenue Canada (Custom and Excise), to use in its investigation of allegations of EEC dumping.

Economic research involving the interdepartmental agricultural land base study (ALBS) continued. With the exception of the drainage alternative, the final draft of the economic and financial analysis was completed. Research work was also initiated on the economic impact (societal) analysis. Technical presentations were made to the inter-departmental steering committee.

The resource section examined the economic implication of water erosion in Alberta and prepared water erosion potential maps, under different soil cover types.

Internal studies were also done comparing provincial taxes for four provinces, and evaluating laws, regulations and programs affecting soil conservation.

The resource section continued to provide an up-to-date information service to clients and policy makers. Quarterly reports on *The Alberta Agriculture Real Estate Situation* and the *1984 Annual Agricultural Real Estate Values in Alberta* were published. Responses were also provided to many requests for real estate information.

The branch contributed to the Municipal Affairs Farmland Assessment Manual Update.

Agricultural Economics Advisor

International trade in agricultural products once again dominated the agricultural scene in Canada. Both policy and current issues in trade remained the principal focus of the office of the agriculture economics advisor. The advisor examined a number of trade actions by foreign

governments and producers, as well as trade actions initiated by Canadian producers against imports. Data analysis and recommendations to industry relating to issues of countervail and dumping were provided. The process of international trade litigation as well as the implications of legislative measures taken by foreign and other provincial jurisdictions were examined.

The advisor continued to monitor and liaise with the federal government, other Alberta government departments and the provincial governments on the work of the General Agreement on Tariffs and Trade (GATT) and the committee on trade in agriculture.

Preparatory work for Alberta input into the Canada-United States trade negotiations also accelerated.

The advisor participated in the InterDepartmental Trade Policy Committee chaired by the office of the Alberta trade representative, and undertook a number of speaking engagements on the issue of international trade relations.

The advisor responded to a variety of action requests and prepared briefs on agriculture trade issues. Advice was also given on a variety of macro-economic issues and financial and policy measures of the federal government, on Common Agricultural Policy reform prospects, the United States farm bill, and other agriculture development policy matters. The advisor worked with the marketing sector with respect to international trade and departmental programs.

Statistics Branch

The statistics branch provided Alberta's farmers, agricultural industry, farm organizations, agribusiness and government with agricultural statistical information services.

Staff members maintained liaison with the agriculture division of Statistics Canada, Agriculture Canada, farm and business organizations and other government departments. The branch completed several surveys when other sources proved to be nonexistent or inadequate.

The annual *Statistics Yearbook* was released in August.

An update on *Farm Cash Receipts and Expenses for Alberta Farmers* was prepared and released each quarter.

A regular crop report was released every two weeks from May to October with a year-end summary published in December. A quarterly forage report supplemented the crop report.

An annual survey of beekeepers was conducted to estimate the number of beekeepers, number of colonies, average yield and total production of honey in Alberta. Branch staff also conducted a survey of vegetable and potato producers to obtain acreage and production data. In addition, a sheep survey which obtained information on production and marketing intentions of Alberta sheep producers was undertaken.

A one-page factsheet presenting major provincial agricultural statistics was issued.

The branch continued its involvement in price collection and reporting by releasing reports on weekly average retail food prices for Edmonton and Calgary; weekly producer, wholesale and retail food prices; and monthly average farm input prices in Alberta.

The branch prepared and released a report on agricultural imports coming into Alberta and agricultural exports leaving the province.

The branch continued to collect information on agricultural products after they leave the farm gate.

Branch staff conducted a specialty crop survey to obtain additional information on acreage and yields of these crops in Alberta Summaries of the results were sent to producers who co-operated with the survey.

Custom rate data and information were collected by branch staff from many producers across the province.

Agricultural Law Program

The purpose of the agricultural law program was to inform the agricultural community as to the laws that affect them and to explain what they mean and how they are applied. The emphasis was on the preventative approach with the idea of having producers organize their affairs so as to avoid serious legal and financial troubles in the future. However, where necessary, assistance was offered to producers with immediate problems.

The general areas of law that this program dealt with were:

Contract law — Mortgages, debentures, personal guarantees, sale agreements, leasing agreements

Insolvency — Foreclosures, receiverships, bankruptcies

Farm taxation

Estate planning — Capital gains, retirement planning, property ownership, family harmony, wills

Estate administration

Farm business arrangements & organizations

Divorce and matrimonial property law and how it affects the farm

Property disputes — Fence line problems

Surface rights and mineral laws

Trespassing laws

Laws relating to animals

Negligence and contractual disputes relating to agriculture — Chemical application, fertilizer application, poor seed

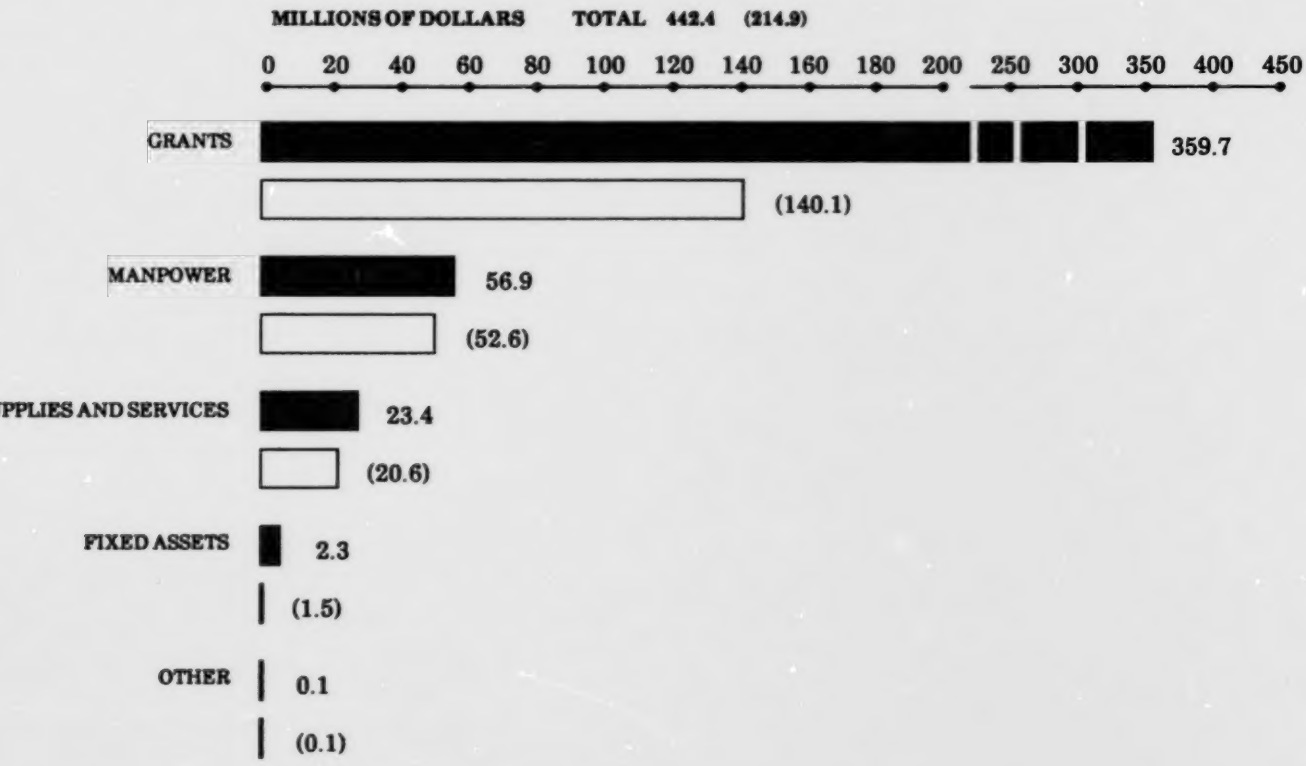
The goals of the agricultural law program were achieved by means of the presentation of seminars at numerous locations throughout the province; the writing and distribution of publications; the writing of magazine columns; interviews given to newspapers, magazines, television and radio; and individual consultations both in the office and in the country. The individual consultations ensured that information given through public forums was fully understood by the individuals and enabled staff to keep in touch with the problems facing producers.

FINANCIAL AND ADMINISTRATIVE SERVICES

Financial and administrative services was responsible for:

— the processing for payment of all expenditures incurred by the department
— the collecting and depositing of all departmental revenue
— the budgeting and other financial matters relating to the department
— the co-ordination of departmental administrative facilities and services

TABLE OF EXPENDITURES CONTROL GROUPS 1985-86 UNAUDITED AND (1984-85)*



* Figures in brackets are for 1984/1985

ALBERTA AGRICULTURE EXPENDITURES 1976-86

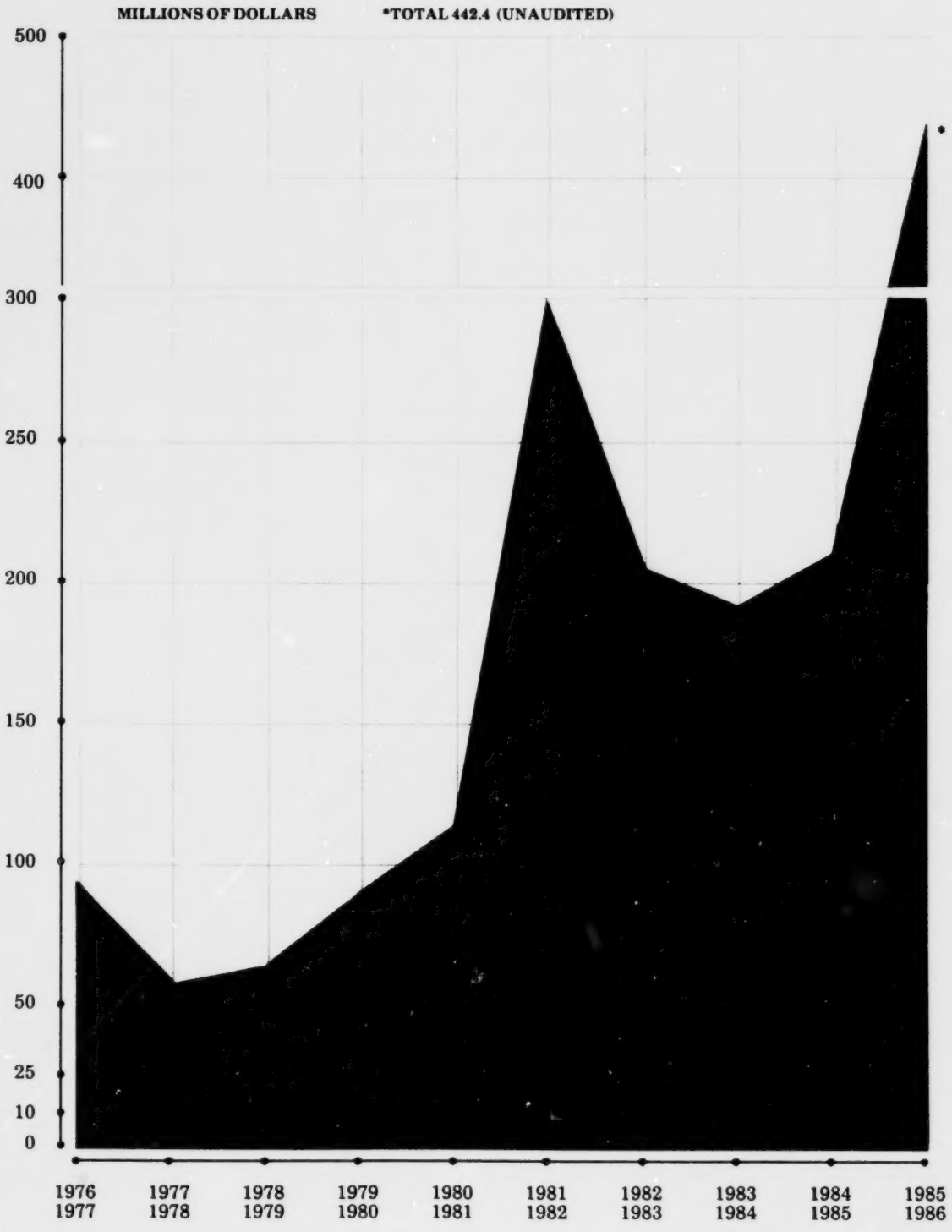
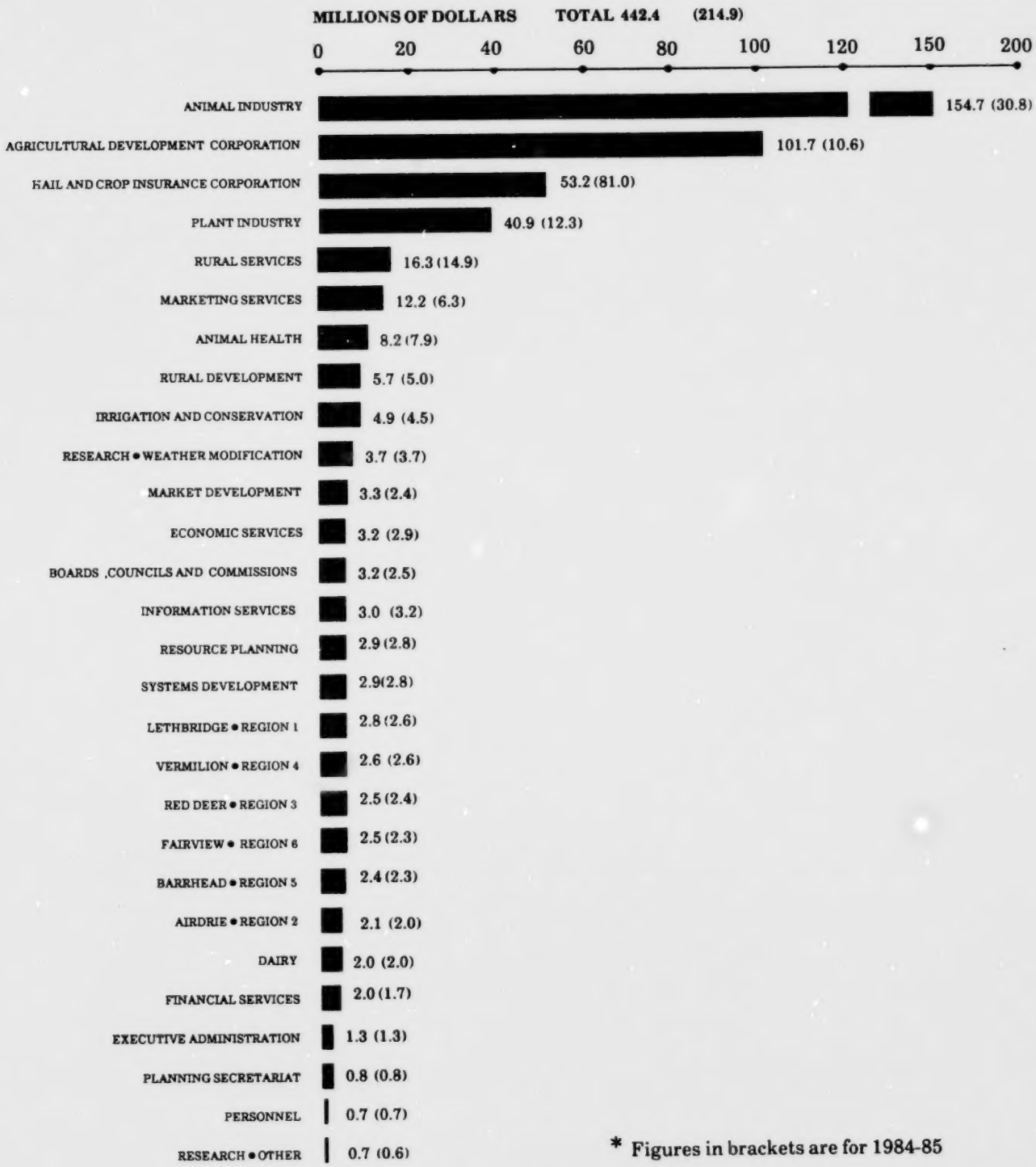
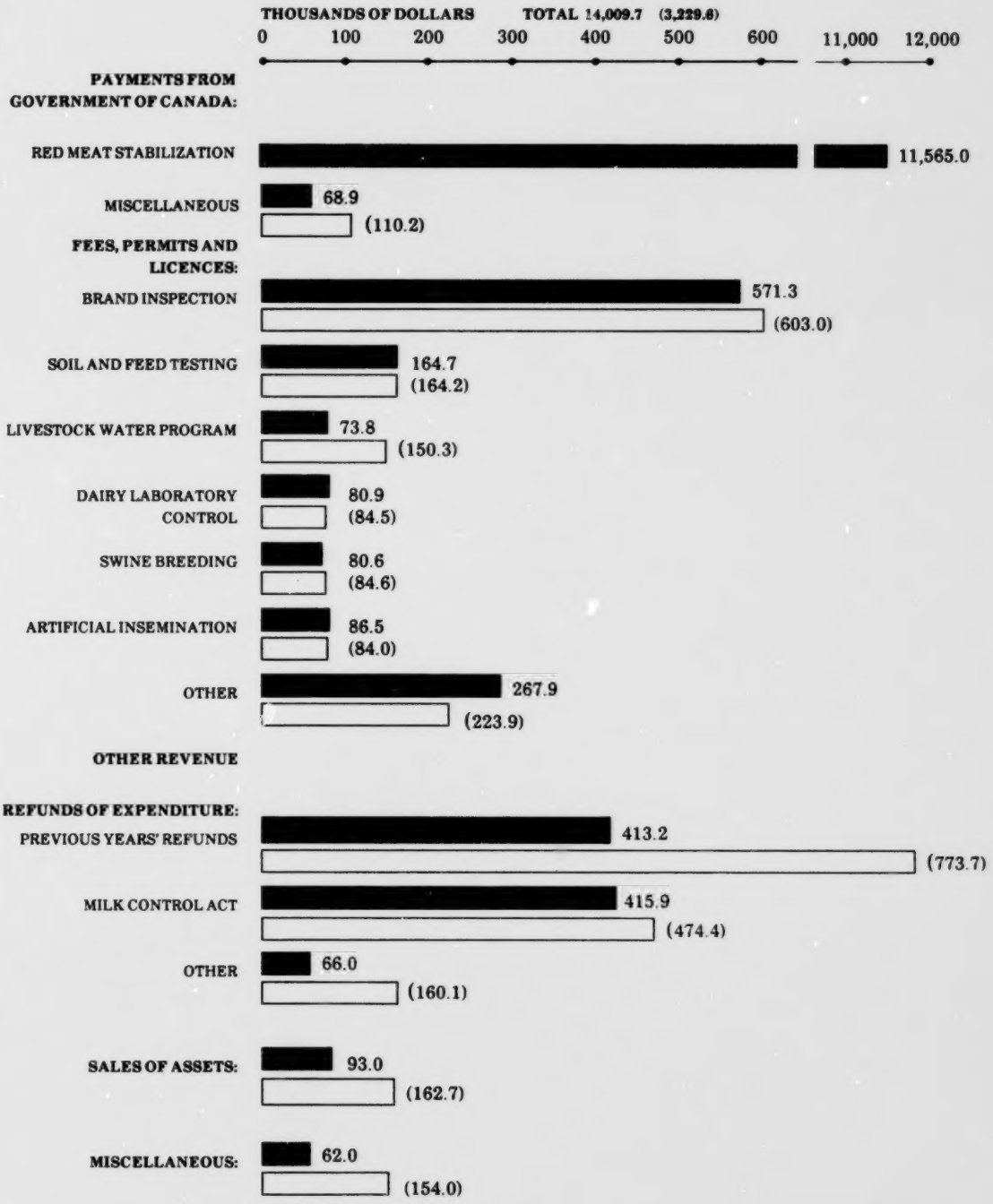


TABLE OF EXPENDITURES 1985-86 UNAUDITED AND (1984-85)*



* Figures in brackets are for 1984-85

TABLE OF REVENUES 1985-86 UNAUDITED AND (1984-85)*



Other revenues received from the Government of Canada, such as the Nutritive Processing Agreement and Hail and Crop Insurance, are not reflected in the above figures, as they are collected and reported by Alberta Treasury.

* Figures in brackets are for 1984-85

PERSONNEL SERVICES

Personnel services administered and assisted in the development of policies and procedures for the department in the areas of staff and organization development, occupational health and safety, classification and compensation, recruitment and selection, employee relations and pay and benefits administration.

Staff and organization development provided management advisory services and human resource development co-ordination to ensure that job-related learning was available for all staff. Advice was provided in the management process, which included performance appraisal systems. Several organization development interventions were initiated.

The section processed 10 applications for education leave and 1411 applications for training courses of which 284 were in-service, 605 out-service and 522 in-house.

Occupational health and safety concerns were investigated and resolved during the year. The section provided appropriate programs to meet the requirements of The Occupational Health and Safety Act and assisted managers, joint worksite contacts and committees in ensuring that employees had a healthy and safe workplace. A worksite smoking policy and guidelines was issued. In addition, St. John Ambulance First Aid re-certification courses were provided. This program was carried out with the assistance of the Personnel Administration Office providing safety co-ordinator support in worksite investigation and inspection. Division staff provided support in other aspects of occupational health and safety.

OCCUPATIONAL HEALTH AND SAFETY PROGRAM STATISTICS 1985 - 1986

Total possible manhours	3,427,479
Lost time injuries	32
Medical aid cases	32
Fatalities	0
Frequency rate	9.34*
Severity rate	71.77**
Work days lost	246

** Frequency rate is the number of injuries per million manhours.*
*** Severity rate is the number of work days lost per million manhours.*

DIRECT COSTS PAID OUT BY THE WORKERS' COMPENSATION BOARD:

Compensation of wages	$57,649.21
Medical costs	45,215.78
Pension awards	101,602.54
Average award per claim	3,194.80

Personnel administrators provided training resources, recruitment and selection, position classification and employee relations services to the department. Temporary employment became a larger responsibility due to the increase in emergency programs.

An increase of approximately 21 per cent in recruitment activities was experienced, with the number of applications received on each competition remaining at approximately the same level as the previous year.

The department was involved with downsizing activities which resulted in the abolishment of two permanent salaried positions to be effective April 1, 1986. Wage employment varied from 350 to 650 during the period, resulting in a document processing increase of over 5000.

PERSONNEL SERVICES TRANSACTIONS FOR THE PERIOD April 1, 1985 to March 31, 1986

Number of competitions (incl. exemptions)	133
Commencement	148
Terminations	156
Transfers	105
Reclassifications	204
Classification appeals - upheld	1
- denied	3
- pending	0
Updates	99
Position creations - (permanent and temporary)	61

The personnel committee responsible for administering the decentralized classification program for the bargaining unit and opted out and excluded classes met on a regular basis to review classification requests.

The management classification review initiated in 1983 was completed. The review was undertaken to improve the evaluation criteria used in differentiating between both class levels and sub-levels and to achieve equitable classification levels between management positions within the department.

The management sub-level review committee processed nine submissions, granting eight and denying one. The committee also reviewed one position that was reclassified into management from the opted out and excluded group that required a sub-level allocation decision.

Several employee relation interventions occurred within the past year. The following resulted in formal hearings: One grievance, involving performance, was denied at Level II and three grievances were heard at Level III; two involved performance and a three-day suspension. A third grievance at Level III concerned dismissal and was settled. One policy grievance was received from the union involving improper pay and was settled. A dismissal case was heard at Court of Queen's Bench with the decision being in favor of the department.

PERMANENT POSITIONS AS OF APRIL 1, 1985

	Clerical	Professional	Technical	Others	Total	%
Executive	8	6	—	—	14	1.0
Production Sector	190	153	200	5	448	32.9
Field Services Sector	157	275	8	—	440	32.3
Marketing Sector	22	65	12	—	99	7.3
Research & Resource Development Sector	15	47	75	3	140	10.3
Planning, Economics & Administration Sector	72	83	3	10	168	12.3
Surface Rights	16	14	—	—	30	2.2
Farmers' Advocate	2	3	—	—	5	0.4
Dairy Control Board	7	4	3	—	14	1.0
Marketing Council	1	2	—	—	3	0.2
Grain Commission	2	—	—	2	0.1	
Department totals	392	652	301	18	1363	100
Percentages	28.8	47.8	22.1	1.3		100

OTHERS: Duplicating equipment operators, audio-visual aids technicians, bindery equipment operators, stock keepers, equipment operators, motion picture photographers, maintenance service workers, brand recorders, heavy duty mechanics and mobile drill operators.

INFORMATION SERVICES

The communications division was renamed the information services division, with the records management program and the library services branch being added to it. The division provided information to the agricultural industry and the general public on Alberta agriculture programs, policies, production and marketing. All areas of the department were assisted in complying with legislature and policy requirements for long term records storage.

The department's public relations programs were facilitated by providing organizational support and publicity for special events such as Agriculture Week and the Alberta Agriculture Hall of Fame. Producer groups and agricultural organizations also received assistance.

Broadcast Media Branch

The broadcast media branch produced a daily radio program and over 20 films and video tapes. It also provided a film and video lending service, audio visual production service, and advice and training in effective use of broadcast media.

Two hundred and sixty-one *Call of the Land* programs were produced in 1985-86 and were aired on 15 AM and eight FM stations in Alberta to a daily listening audience of over 55,000. More than 800 separate stories were aired on the programs.

Twenty film and video tapes were produced. These included 14 extension films, three public service announcements and three vignettes for the Agriculture Hall of Fame. Several films won awards in a variety of national and international film competitions. They include *At The Crossroads, The Rural Boardroom, When Murphy Goes Farming and The Buck Stops Here.*

Over 6,500 films, slide kits and video tapes were loaned to schools, 4-H clubs, department staff and other organizations. Sixty-four new films and videos were added to the film library.

The branch provided an audio-visual service to department staff. Overhead transparencies, slides and flipcharts were produced to enhance staff presentations. A 10,000 slide collection was updated.

The branch head helped design and resource 25 days of workshops dealing with enhancing presentation and communications skills. Radio commentators were also resource personnel at some of these workshops.

Print Media Branch

The branch provided technical information on agriculture to farmers and others in the agriculture industry, and general information on agriculture and food to the general public. Staff of the department and associated boards and commissions were provided with advice and training in effective print communications, and editorial and publishing services.

Agri-News, a weekly news release package, provided 532 articles to 250 media facilities and 4,100 other recipients. Special press kits were prepared for the Agriculture Hall of Fame and distributed to the media throughout Alberta. Several seminars and workshops on writing for the media were conducted for department staff. Other press services provided were advice on the effective use of the media, assistance with the editing and rewriting of columns and articles for field staff, and the production of special press releases.

Two hundred and thirty-eight new and revised publications were written, designed, edited and printed for general distribution. This included 157 technical publications for farmers and their families. A monthly listing of these new and revised extension publications, *What's New in Publications*, was produced and sent to 5,000 persons in the agriculture industry. Assistance with the development and placement of the department's advertising was provided.

There were 419 printing jobs placed with commercial printers and supervised by branch editors. The in-house duplicating shop printed a total of 19 million pages for the 1,804 jobs it handled. This included 51 different newsletters and reports for regular distribution to the public.

More than 1,200 different publications on commercial farming, home economics and gardening were available to the public from the print media branch and field offices. There were 929,952 copies of publications distributed. The branch responded directly to 20,736 requests from the public and handled 4,696 orders

from field offices for publications. All 4-H manuals and other club materials were reordered, stored and distributed by the branch.

Timely information on commercial farming was sent monthly to more than 50,000 readers by means of an insert in the Alberta edition of the *Country Guide* magazine.

Staff graphic artists handled 214 design jobs for the department's printed and audio visual materials.

Library Services Branch

The library continued to provide services and programs to department staff, and assisted in meeting the information requirements of agribusiness and producers in Alberta.

In 1985-86 the library system consisted of the main library in Edmonton and 14 regional and branch libraries throughout the province. During the year the library was accorded branch status within the department and became known as the library services branch.

The library staff actively participated in the Canadian and international agricultural library community through attendance at the "7th World Congress of the International Association of Agricultural Librarians and Documentalists" held in Ottawa in June. The library was involved in planning for this congress, which is held once every five years, through active membership on the Canadian planning committee. A display promoting the library and its programs was prepared and a selection of publications was distributed. A meeting of Canadian agricultural librarians was held to plan future network co-ordination, including the development of secondary agricultural information tools. Other highlights included publication of the *Agricultural Conference Proceedings Index 1982-84*, a continuation of an earlier publication, as well as two further publications in the library's bibliography series: *Plant Science: a Selective Bibliography* and *Land Use: a Selective Bibliography*.

A broad range of reference and interlibrary loan services were offered to department staff, including on-line access to almost 300 data bases through four electronic services. GRASSROOTS, now accessed through the iNet 2000 network, was used for demonstration purposes.

A number of specialized orientations and workshops were presented to particular groups and branches within the department.

A record number of library materials was circulated, an increase of nearly 32 per cent over the previous year. The library participated fully in SCITECH, in co-operation with the Alberta Environment Library and the Alberta Research Council Library. By the end of the year there were almost 44,000 records in the data base. A procedures manual for adding the library's records to SCITECH was completed, as was a major revision to the *SCITECH On-Line User's Manual*. The library continued to use UTLAS for cataloguing support.

A temporary employment position was established to provide subject access to periodical and newsletter titles in our collection. A project to improve on-line retrieval of records in SCITECH was also completed.

SYSTEMS DEVELOPMENT

The systems development division continued to provide for the maintenance, development and optimal use of computerized systems within the department.

Ongoing systems included dairy herd improvement, dairy farm inspection, cattle branch retrieval, shelterbelt distribution, veterinary information retrieval, soil and feed testing analysis, soil information (a joint federal/ provincial effort), herbicide recommendation, weed alert, a reporting system for Farming for the Future, a financial planning system for market development, an agricultural processing industry directory, fixed assets inventory, departmental mailing labels, departmental telephone directory, budget information, apiculture registry, financial administration and feed freight assistance program.

Development was initiated for the following systems: insecticide recommendation, soil test recommendation, Surface Rights Board automation, farm fertilizer price protection plan, grasshopper program, feed grain market adjustment program, livestock assistance programand red meat stabilization program.

The division continued to provide service to department staff in the areas of statistical analysis, mapping and graphics, procurement of hardware and software, data entry, the administration of electronic data processing funds and the management of word processing services.

The division participated on the system management group in the continuing development of Alberta Agriculture Programmed Access to Communications (AAPAC) to deliver computerized services to the agricultural community. The infrastructure for AAPAC extending to the regional offices was in operation.

1985
1986

PRODUCTION

PRODUCTION

The sector undertook research, generated and transferred production technology, provided services and promoted practices to assist Alberta farm families and processors to maximize their financial returns.

The sector consisted of four divisions: animal health, dairy, animal industry and plant industry. The sector continued to be responsible for the administration of 18 pieces of legislation, and operated 14 widely decentralized laboratory, research and service centres in support of the industry. The sector co-operated with and financially supported joint projects with the Faculty of Agriculture and Forestry, University of Alberta; Alberta agricultural colleges; the Western College of Veterinary Medicine; the Veterinary Infectious Disease Organization and the research branch of Agriculture Canada.

PLANT INDUSTRY DIVISION

In 1985-86 the plant industry division of Alberta Agriculture was comprised of five branches: field crops, crop protection, soils, tree nursery and horticulture centre and horticultural research center. The crop protection and soils branches were located in Edmonton while the field crops branch was located at Lacombe, the tree nursery and horticulture centre at Oliver, and the horticultural research center at Brooks.

The division's main objective was to provide services in crop production and related sciences, as the production, nutrition and protection of crop plants for food and aesthetic use is fundamental to agriculture. Practices recommended to farmers were concerned with the long-term conservation of the soil, sustainable productive capacity and the safety of all segments of the population.

Field Crops Branch

Owing to the pressure of drought and poor returns, there was a large demand for technical information from producers and allied industries.

A survey of irrigated canola farmers was conducted and the information was incorporated into a manual. A new *Winter Wheat Production Manual* was prepared.

The 77 municipal co-op seed cleaning plants processed 27 million bushels of grain and canola, two million bushels less than the six year average.

Fifty upgrading grants to seed plants were issued for a grant total of $552,767 representing 40 per cent of the cost. Replacement plants were built at Vermilion (provincial government share $462,233) and Stony Plain (provincial government share $483,700).

Special crops occupied approximately 55,000 acres in Alberta, and wild rice was seeded on 6,000 acres.

Eleven forage associations continued their extension role and were assisted with $270,000 of grant money.

The research section acquired approximately 140 acres of land adjacent to the research farm at Lacombe for breeder seed production. A new spring triticale and a 6-row feed barley were approved for licensing and release in 1986-87. Pedigreed seed production in Alberta was undertaken by 1,012 seed growers on 200,000 acres.

Seed technology seminars, together with field tours and probationary seed courses, continued to be well attended. The research farm sold $36,000 worth of breeder seed and received $25,000 in royalties on pedigreed seed sales during fiscal 1985-86.

The division continued to operate its research winter nurseries in California and Oregon.

Crop Protection Branch

The branch dealt with the mitigation, management and control of crop pests in Alberta. These included weeds, insects, diseases and vertebrate pests.

Publications produced in 1985-86 were:

- *Controlling Brush in Alberta*

- *Rat Control on the Prairies*
- *Weed Alert Posters*
- *Guide to Crop Protection in Alberta - Part I - Chemical*
- *Guide to Crop Protection in Alberta - Part III - Pesticide Application Equipment*
- *Recognizing Herbicide Action and Injury*
- *Weeds of Alberta series.*
- *Backyard Pest Management*
- *Application and Incorporation of Granular Herbicides*
- *Electric Fences for Livestock Predation Control*
- *Emergency Procedures for Pesticide Issues*
- *Managing Herbicide Residues*
- *Field Scouting Manual*
- *Field Crop Insects of Alberta*
- *Weed Seedling Identification Guide*
- *Minimizing Erosion Under Summerfallow*
- *Roadside Vegetation Control - Operations Manual*
- *Vegetation Control Options For Rural Electrification*

Seven technical papers were printed in scientific journals. Staff produced displays, audio-visual material and conducted surveys. Crop Protection 86, a home study program on integrated pest management, was presented to 3,000 students.

Weed control remained a high priority with Alberta producers in 1985 despite a tight economy and limited rainfall.

Concern about soil conservation and economics encouraged continuous cropping which stimulated perennial weeds.

There was a rise in lawsuits involving herbicide nonperformance and crop injury. Liability insurance became a problem with aerial applicators.

Cuts in government research resulted in less work in crop rotation and cultural weed control. Industry research focused on the development of new pesticides and hybrid varieties and equipment.

The branch's training and extension staff provided industry and producers with technical information.

The Weed Control Act was used actively. The knapweed eradication program continued to reduce infestations. Research projects were established on toadflax, tall buttercup and tansy. Information on the biology and control of these weeds was transmitted to producers.

Problem wildlife section was responsible for supervision and co-ordination of provincial programs, extension, procurement and distribution of toxicants and control devices, and administration and implementation of portions of The Alberta Agricultural Pests Act.

The section was comprised of a supervisor, three regionals and four specialists. Wage help was used to conduct coyote control in areas not easily serviced by permanent staff.

Major programs were rat control, rabies suppression in skunks, prevention and control of coyote depredation of livestock and poultry, and prevention and control of crop or livestock damage from field rodents and nuisance birds. Alberta was kept essentially free of Norway rats for the thirty-fifth consecutive year.

The grasshopper infestation in 1985 was the worst recorded. A grasshopper control assistance program rebated 50 per cent of the cost of insecticides. The amount paid out was $3.2 million.

Southern Alberta experienced the most severe outbreak of pale western cutworms since 1931: 123,000 acres of winter wheat and 12,000 acres of spring-seeded crops were lost. A total of 247,100 acres were sprayed, 50,000 acres were reseeded, and losses plus control costs were at least $13.6 million.

Honey production declined by 9 to 10 million pounds from 1984. Many reports of bee damage from insecticides were heard. A subsidy of $15 per hive was declared for all beekeepers with a 100 hive deductible.

Surveys and diagnostic services were provided by two pathologists located in Fairview and Edmonton. Branch staff worked closely with other pathologists at Olds, Vegreville and Brooks. Seedling blight and root rot were serious in the Peace River region.

Disease was very low in the rest of Alberta although verticillium wilt and blackleg continued to spread.

Soils Branch

The soils branch provided extension, research and diagnostic programs to producers. A high demand continued for information on more efficient fertilizer use as farmers sought methods of improving crop production efficiency to cope with very narrow cost-return margins.

Field research on dryland and irrigated crops provided new information for general and soil test recommendations on new crops and varieties. The branch considered fertilizer use efficiency as a high priority because of its influence on net returns in crop production, which can amount to as much as 30 per cent of the cash input costs. Fertilizer sales for the year ending June 30, 1985 increased to 979,655 tonnes from 924,488, and were valued at $300 million. Sales of nontraditional soil amendments, fertilizers and growth regulators were high. Many of these products were not registered under The Canada Fertilizer Act and had not been proven to be beneficial.

The agricultural lime freight assistance (ALFA) program provided grants of over $340,000 to 87 applicants for 12,000 tonnes of lime or marl.

A farm fertilizer price protection plan was announced on April 1 which provided grants to farmers to reduce the cost of farm inputs. Payment was based on $50 per tonne of nitrogen (N) and $25 per tonne of phosphate (P_2O_5). The program was effective from August 1, 1984 to July 31, 1986. During the first fiscal year, $21,232,005 was paid out on 942,865 tonnes of fertilizer to 28,187 farmers.

Soil, plant and animal feed analyses and recommendations were provided to farmers on a fee basis and to researchers and department staff on a nonfee basis as a diagnostic service and a contribution to crop and animal research. The total number of soil, plant and animal feed sample analyses were down to 39,099 from 43,204. Farm and diagnostic sample numbers remained high while numbers of research samples declined.

Alberta Tree Nursery and Horticulture Centre

The Alberta Tree Nursery and Horticulture Centre had an excellent year in 1985-86. Field and container stock performed well under somewhat adverse conditions. For the first time several hundred thousand plants were surplus to requirements.

Cutbacks in field and turf research were major program concerns; both were to be maintained with no new ones started.

The tissue culture centre work on saskatoons and black cherry, which was a new venture with the University of Alberta, worked out very well.

A greenhouse specialist was hired as recommended by the greenhouse task force.

Trade and industry contacts were numerous, and nursery visits were started. Each of the specialists conducted production tours for producers, wholesalers and consumers. Three *Production Notes* newsletters were issued.

Alberta Horticultural Research Center

The Alberta Horticultural Research Center (AHRC) at Brooks, was involved in province-wide extension and applied research activities relating to all areas of horticulture and irrigated specialty crops. On- and off-site co-operative research projects were conducted in collaboration with personnel from Agriculture Canada, the Alberta Environmental Centre and the University of Alberta, as well as staff from the plant industry and irrigation and conservation divisions of Alberta Agriculture.

The seed potato improvement program, formerly administered by the crop protection branch, was transferred to the Alberta Horticultural Research Center. The program continued to be located at Olds.

The environmental horticultural section was responsible for research, extension and demonstration projects related to the production of greenhouse crops, ornamentals and nursery crops, small fresh and native fruit.

Applied research and extension and demonstration assistance were provided for vegetables, potatoes, seed potatoes, corn, as well as a variety of special crops such as beans, forages, and herbs and spices.

Technical support for these commodity based programs was provided by the laboratory services section, which operated the regional crops laboratory, plant pathology, entomology, weed control, crop storage and food processing programs. This section also conducted research, extension and demonstration projects.

Test sites for the research and demonstration functions of AHRC staff were located throughout the province. In addition to the utilization of the three farms at Brooks, research demonstration plots were found in locations such as Bow Island, Edmonton, Standard and the Peace River region.

The extension activities of AHRC personnel supported and complemented extension services provided by other Alberta Agriculture staff in regional and district offices. Staff regularly conducted, or participated in, numerous short courses and seminars held throughout the province. To ensure a rapid exchange of information between the producer and the researcher, staff hosted commodity oriented field days at AHRC and participated in similar field days held elsewhere. Membership and active involvement in commodity advisory groups, Agriculture Canada expert committees, and industry-based committees facilitated the dissemination of applied research information to all sectors of the horticulture industry.

ANIMAL INDUSTRY DIVISION

The division's five branches responded to the needs of producers and agribusiness concerned with production and marketing of meat producing animals and poultry.

The division's activities included extending technical information to producers and agribusiness, solving production problems, liaising with other segments of government to improve service to producers, administering and updating acts and regulations in concert with industry requirements, as well as advising on and participating in pertinent applied research projects.

The division continued negotiating the terms of a red meat stabilization program with the federal government and other provinces. An interim insurance plan was introduced to cover April 1, 1985 to September 20, 1985 and a national red meat stabilization program was introduced early in 1986.

The division was also involved in other producer assistance programs such as the Canada-Alberta livestock drought assistance program, the Alberta feed grain market adjustment program and the Alberta livestock assistance program.

Regulatory Service and Feeder Associations Branch

The main role of the regulatory services and feeder associations branch was the administration of certain acts and their regulations. The acts and regulations were designed to protect livestock producers by providing the following:

- brand registration
- brand inspection service
- licensing and bonding of livestock dealers and agents
- licensing of stockyards and stockyard operators
- protection of lands and agricultural products from livestock running at large
- investigations of fraudulent trade practices concerning livestock
- a means whereby members of feeder associations may acquire livestock for feeding and/or finishing.

The feeder association section administered The

Feeder Associations Guarantee Act which enabled members of feeder associations to acquire livestock for feeding and finishing. Thirty-six feeder associations operated under The Feeder Associations Guarantee Act, using $43,699,555 worth of credit to purchase 98,287 cattle and 5,255 sheep. The amount outstanding as of August 31, 1985 was $26,298,581.63.

Under The Stray Animals Act, 1,408 head of livestock were impounded. One thousand two hundred and forty-seven heads were returned to the rightful owners after they paid the costs of capture, transportation and maintenance. The balance, 161 head, was sold by public auction.

Fifty-three livestock markets and 57 livestock assembly stations were in operation at year end. There were 935 livestock dealers and agents compared with 941 in 1984. Twenty claims were received against four livestock dealers' bonds during the year.

The number of head of cattle and horses inspected through markets and on export was 3,120,443, a decrease of 61,710 head from 1984.

Six branding demonstrations were conducted.

SUMMARY OF FEEDER ASSOCIATION OPERATIONS 1981 - 1985

Feeding Season	No. of Assn.	Cattle	Sheep	Amount of Credit
1980-81	37	63,151	3,441	28,157,530
1981-82	38	68,710	4,080	27,761,209
1982-83	33	75,917	5,895	32,585,619
1983-84	37	91,497	4,517	39,626,822
1984-85	36	98,287	5,255	43,699,556

RECORDING OF BRANDS SUMMARY

	Cattle	Horses	Sheep	Total
New Brands Issued	1,220	409	—	1,629
Transfers	648	89	0	737
Certified Extracts	0	0	0	0
Cancelled Brands	418	63	0	481
Brands Renewed	9,891	1,445	3	11,339
Brands Reissued	106	28	0	134
Brands in Good Standing at December 31, 1985	45,778	7,555	12	53,345

Poultry Branch

1985 has been a relatively stable year for the poultry industry. The egg and turkey sectors continued to operate within a national agency and protested the agency-imposed cutbacks. The hatching egg and broiler sectors operated outside the national agencies, but these growers still found themselves operating under production cutbacks. Feed prices edged lower, and when the feed grain market adjustment was included, an overall decrease of approximately 10 per cent occurred during the year. Egg price changes and broiler meat prices have resulted in little change in producer margins. Broiler chicken producers faced lower returns in 1986. Broiler breeder quota allocation increased to 85 per cent of base. No boards increased their quota base during 1985.

The move to make quotas saleable for the various poultry commodities progressed somewhat during the year.

Problems of surplus production continued to plague the poultry industry. Commercial egg producers saw their levy go to $0.09 per dozen, largely to remove surplus eggs. Broiler growers opened the new year with burdensome stocks of chicken meat on hand which contributed to a subsequent decline in producer prices. There appeared to be little hope for quota increases on the part of commercial egg producers (88%), or broiler hatching egg producers (85%). Increases in demand were more than offset by increased rates of lay on the part of birds presently in the field.

The broiler breeder sector of the poultry industry increased to 85 per cent of the quota level. With the increase in poultry meat production, all egg production was utilized and a few hatching eggs were brought into the province. During the year, this sector held regional meetings in which the formation of a national agency was discussed. At the annual meeting of the Alberta Hatching Egg Marketing Board, the producers voted in favor of joining a national agency that would set production levels within Canada and control the importation of hatching eggs and chicks. The approval of Alberta Agriculture is required before the Alberta Hatching Egg Marketing Board joins a national plan.

The 1985 laying flock of 1,931,600 layers consisted of 1,503,600 regulated and 428,000 unregulated layers.

The production of eggs from Alberta increased from 34,508,000 dozen to 38,124,000 dozen, or an increase of 10.5 per cent. This increase reflected the change in rate of lay from 19 to 21 dozen for hens in regulated flocks. The movement of eggs into the province showed a decrease of 7.7 per cent for a total of 8,960,000 dozen or 172,000 dozen per week to accommodate the market demand for Alberta. The opening of a new retail food chain in the Edmonton area in 1985 changed the marketing patterns of eggs and poultry products, necessitating adjustments.

Domestic table egg disappearance fell by 0.4 per cent, while the domestic consumption of processed eggs rose for the third consecutive year by 2.4 per cent. The processed eggs share of the overall Canadian market reached 10.9 per cent in 1985.

Commercial egg marketings through registered egg stations were 34.56 milllion dozen in 1985 compared with 34.80 million dozen in 1984, a decrease of 0.7 per cent showing the decrease in number of ungraded eggs brought into the province, plus increases in quota utilization and hen production in Alberta.

In Alberta, chicken production showed an increase of 4.3 per cent for a total of 40.387 million kg of all chicken, compared to 38.707 million kg in 1984. The year 1985 ended with very high production levels which continued into the first three months of 1986, resulting in very high storage levels. This combination resulted in weaker producer prices, lower retail prices, and may result in increased consumption of chicken meat. The trend in Alberta is to move to a greater percentage of the chicken market being served by fresh product as compared to frozen. Cornish, roaster and regular weight ranges recorded production increases. Per capita disappearance increased by 1.3 kg, or 7.2 per cent, and gives a 10 year average growth rate of 4.2 per cent. Canadian per capita consumption registered a 7.8 per cent increase over the period. The Alberta Broiler Growers Marketing Board voted not to join the National Chicken Agency.

Total turkey marketings through registered stations in 1985 showed 9.37 million kg as compared to 9.65 million kg in 1984, for a decrease of 3.0 per cent. Turkey disappearance rose by 1.4 per cent during this period.

The purpose of the administration section was to develop and administer regulations, policies and programs relative to the industry under The Livestock and Livestock Products Act. Poultry branch programs were related to increasing poultry production, improving efficiency, and thus farm income, and keeping poultry products competitive with other protein sources.

The department developed the Research Institute with the University of Alberta. The poultry branch was part of the departmental team which developed the guidelines for the poultry research chair at the University and the selection of qualified researchers to fill it. Funding for poultry applied research, to be conducted at the University of Alberta poultry unit, was provided from the poultry branch budget.

The purpose of the poultry health section was to prevent and control poultry diseases, and to safeguard the public health.

In co-operation with the animal health division all breeder flocks and hatcheries were monitored for salmonella detection and reduction. This program was designed to increase agricultural production by reducing the number and kinds of disease producing organisms in poultry and their environment. Salmonella was emphasized because of its public health significance. The increase in production has led to improved income for the poultry producers of this province.

Rabbit extension information packages were mailed to 117 enquiries. Ten individual calls were made to rabbit raisers for various reasons. Processing figures indicate approximately 18,270 rabbits, mostly fryers, were slaughtered in Alberta in 1985, an increase of

approximately 6,400. Renewed interest in processing rabbits was evident.

There was a continual demand for factual and updated information on costs of production. Time was spent with farmers reviewing and assisting with loan applications from ADC, FCC, and many banks.

The branch developed cost of production models for shell eggs, broiler chicken, turkeys and broiler breeders.

The branch's role in extension has been to interpret and impart to the industry and to the general public, technical, scientific, economic and general information on poultry production. Staff made 747 farm calls, plus 293 calls to the allied trade, and attended 213 meetings, including both industry and department meetings.

In February 1986, the poultry industry conference was held in Red Deer. The Egg Marketing Board, the Hatching Egg Board and the Turkey Marketing Board all held their annual meetings at that time and the Chicken Marketing Board held an information meeting. The poultry serviceman's workshop was held at Lake Louise in October and major poultry shows were held at Calgary, Wetaskiwin and Lloydminster.

Pork Industry Branch

The pork industry branch assisted Alberta producers by providing information on production technology, marketing, financial management and record keeping. Assistance provided included a program for genetic improvement, the sale of swine semen, swine production home study materials, swine record system materials and advice, training in swine artificial insemination, *Pork Production Handbook* update information and many seminars and lectures relative to production technology.

The information provided was coordinated by the branch and delivered by branch staff; four regional swine specialists and other extension staff. Technical factsheets were written by department resource staff, university staff and others for the *Pork Production Handbook*, which has a subscription list of approximately 1,500. The existing 75 factsheets were also made available to new subscribers. A research review column and a column answering questions on swine nutrition were provided in each issue of the quarterly *Western Hog Journal*, which has 2,500 subscribers of whom 12,000 are in Alberta.

Staff helped organize, resource and carry out the 11th annual Alberta pork congress in Red Deer with 3,000 attending; the Alberta Pork Seminar in Banff with 100 registrants; an in-service course for 40 department and industry swine consultants, and approximately 25 other regional and provincial extension meetings related to swine production. Swine semen was produced at and distributed from the Alberta Swine Breeding Centre at Leduc. Fresh semen was sold in Alberta and the other three Western Canadian provinces. Frozen semen was sold to export customers and used in Alberta field trials. Research to improve the quality of frozen semen and breeding success with it continued.

Technical service and advice in breeding stock selection was provided to 84 producers enrolled on the swine record of performance (ROP) program. The program is intended to determine the value of potential swine breeding stock in terms of growth rate and carcass quality before these animals are put into service. This information is then distributed to all commercial hog producers to aid them in selecting sound breeding stock. A mail-in computerized sow productivity recording program was also offered for the first time to regular ROP users with 10 herds participating. Staff provided a record keeping system with appropriate forms, instructions for use, and advice for computerization to over 500 producers.

Research work carried out under branch supervision included seven on-farm demonstration trials with canola meal for growing swine, on-farm research in the use of frozen semen, and a co-operative trial with the University of Alberta to determine the effect of various management practices and of heat detection methods on breeding success with artificial insemination. Laboratory research was conducted into different semen processing methods, methods of measuring semen quality, and comparison of various semen freezing techniques.

Regional swine specialists completed on-farm demonstration trials with canola meal over the past year. Results were presented to producers in seminars and/or published articles.

Specialists took part in three major seminars; the Alberta pork congress, provincial swine seminar and the

Alberta pork seminar.

Specialists reviewed loan applications and assisted with the farm counselling program.

Branch staff and swine specialists were involved in many farm calls and office interviews dealing with nutrition, breeds, buildings, health and ventilation. Specialists held district seminars throughout their regions. They also participated in green certificate testing and acted as resource personnel for trainers and trainees. Four regional swine breeding seminars were co-ordinated by the Barrhead specialist and branch staff.

Red Meat Stabilization

The pork industry branch administered the Alberta red meat interim insurance payment and the tripartite price stabilization program for red meats in Alberta in the past year.

Both programs were designed to reduce loss of income to producers of red meats due to low market returns. The red meat interim insurance payment was in effect from January 1, 1985 until the tripartite price stabilization program took effect, that is January 1, 1986. The interim program provided support payments for slaughter cattle and hogs in the second and third quarters, and for sheep in the third quarter of 1985 as indicated by the support forumala for the proposed tripartite program. Payments were not made in other quarters of the year, nor was any support payment made for cow-calf (feeder calves) operations because prices were above the tripartite formula support levels. The amounts paid out were reduced by the premium level that would have been required. The Government of Canada, through the Agricultural Stabilization Board repaid the Government of Alberta for the portion of this payment representing that payable under The Agricultural Stabilization Act. Payments made under this program were as follows:

		Per Head Payments			($M)
Livestock Class	Support Period	Total (Less Premium)	Federal ASA Share	Alberta Share	Total Paid
Slaughter Cattle	Q2, 1985	$22.86	—	$22.86	$ 6.4
	Q3, 1985	$79.75	$28.22	$51.53	$23.3
Slaughter Hogs	Q2, 1985	$10.11	$ 2.02	$ 8.09	$ 5.2
	Q3, 1985	$14.30	$ 4.51	$ 9.79	$ 7.2
Lambs	Q3, 1985	$ 1.40			$0.03
TOTAL					$42.1

A total of 8,125 producers received payments of which 3,526 were for hog producers, 3,820 were for slaughter cattle producers and 779 were producers of both cattle and hogs. Lamb payments were made to the Alberta Sheep and Wool Commission.

The tripartite price stabilization program for red meats went into effect in January 1, 1986 in Alberta. Four price stabilization schemes were established, for slaughter cattle, for cow-calf (feeder calves), for hogs and for lambs. The cost of support under these programs is borne equally by the federal and provincial governments and the participating producers on a one-third each basis. National committees for each of these species (cattle, hog and lambs) were established and have met several times to set up program mechanisms and to recommend policy. Deadlines for initial enrolment were set as June 15 for the slaughter hogs and lambs schemes; and June 30 for the cattle schemes. The support levels calculated for the first quarter of 1986 indicated no payouts under any of the schemes.

The slaughter cattle scheme will make a payment in any calendar quarter that the national average margin (national average price less national average cash costs of production) is less than 50 per cent of this margin on average for the same quarter in the previous five years. Similarly, the slaughter hog scheme will make a payment in any quarter that the national average margin is less than 95 per cent of the average margin for the past five years.

The cow-calf (feeder calves) and lamb schemes are based on 10 year moving average prices indexed for inflation. For cow-calf producers, support payments are made for a calendar year if the national average calf price in a year is less than 85 per cent of the indexed moving average price for calves in the previous 10 years. For lambs, support

levels are calculated quarterly, and payments will be made in any quarter that the national average price of lambs is below 95 per cent of the indexed moving average price for the same quarter of the previous 10 years.

Under the program premiums are payable by producers and both federal and Alberta governments. The premiums are adjusted to a level that will cover anticipated support payments.

Horse Industry Branch

Branch staff participated in a wide range of education activities for the benefit of horse owners throughout the province. The horse industry branch administered programs to assist breeders and breed organizations with horse improvement and marketing.

In co-operation with colleges, local organizations or clubs, the branch provided technical or financial assistance for approximately 50 short courses or clinics throughout the province. The small extension staff was able to conduct a considerable number of programs through the use of highly qualified industry people who are available on a part-time basis for teaching. As well, staff provided extension services through farm calls, office appointments, magazine articles, films, technical bulletins, correspondence and personal contact. Of particular interest was the Alberta Horse Breeders Conference which attracted over 200 participants.

In 1985, the horse improvement program, a special show for identifying and recognizing superior horses and breeders, evaluated over 600 horses in 49 classes held for the 14 participating horse breeds. The draft horse section was held during the Calgary Stampede and the light horse sections were held at the Red Deer exhibition grounds the last two weekends in September. The travel assistance program encouraged Alberta breeders to participate in out-of-province national and international championship competitions. During 1985, 30 breeders from five breeds received travel grants.

Staff worked closely with breed associations and marketing staff in developing and conducting promotion and marketing projects. During 1985, a major emphasis was placed on professional demonstrations and high quality displays of horses during the Calgary Stampede and Equi-Fair during the Spruce Meadows masters horse show. As well, a film entitled *Alberta Breeds for the World* was produced.

Staff maintained a leadership role in horse research activities. Besides conducting horse nutrition research at Lakeside Research, the branch supported research conducted through the Western College of Veterinary Medicine, Equine Health Research Fund.

As a service to provincial horse organizations, the branch administered drug testing at all major horse shows in Alberta.

Potential fertility examinations were conducted for 20 Alberta breeders in co-operation with Olds College and private veterinarians.

Beef Cattle and Sheep Branch

The beef cattle and sheep branch continued to extend technology and to provide production, marketing and financial information to the public with the objective of maintaining viable family farms and agribusiness in this province. The branch continued to be involved in research and demonstration projects to solve a variety of problems which limited animal production.

In addition, the branch was heavily involved in the development and administration of new programs to meet the needs of livestock producers resulting from the impact of poor market prices, adverse weather conditions, and the payment of the federal Crow benefit directly to the railways.

The Alberta feed grain market adjustment program was initiated on September 1, 1985. Its purpose was to help Alberta's livestock industry realize its natural advantage and maintain its viability by offsetting the distortion in Alberta feed grain prices which resulted from the payment of the federal Crow benefit directly to the railways. In 1985-86, the average distortion in the price of feed grain in Alberta was estimated to be $21 per tonne. The program was designed to implement the recommendations of the Report of the Committee of Inquiry on Crow Benefit Payment. During the period between September 1, 1985 and March 31, 1986, over 22,000 livestock producers participated in the program

resulting in payments totalling just under $29.9 million.

The drought in southern Alberta in 1984 was followed by an even worse year in 1985. In 1985 the drought, compounded by very hot weather in late June and the first half of July, covered the entire province. Occasional showers in the north-central part of the province resulted in good cereal crop production but occurred too late for the production of good hay crops and pastures. The harvest was severely hampered by wet cold conditions but did result in some late season growth of forage, particularly in southern Alberta. To assist livestock producers cope with the resulting financial loss and maintain viable breeding herds, two programs were implemented resulting in assistance being paid to 31,576 livestock producers. The Canada-Alberta livestock drought assistance program was jointly funded by the federal and provincial governments. A total of $42.1 million was paid to producers in the 1985-86 fiscal year under the initial part of the program. In addition, a total of $49 million was paid to producers in the 1985-86 fiscal year under the initial part of the Alberta livestock assistance program. The final phase of these programs in the 1986-87 fiscal year will result in an estimated additional $40 million in assistance.

In order to allow livestock producers an improved opportunity to insure against the type of losses that occurred in 1984 and 1985, the branch was involved in the development of the livestock feed security program under administered by the Alberta Hail and Crop Insurance Corporation. This program was prepared for introduction in most of the drought prone areas of the province in 1986.

The branch was involved in the development of a red meat stabilization program which resulted in the Alberta red meat interim insurance payment to assist livestock producers from April 1, 1985 to September 30, 1985 and the introduction of the national tripartite red meat stabilization program early in 1986.

The branch continued its activities in animal reproduction, breeding, nutrition and management. It continued with record of performance (ROP) programs, bull test stations, the sheep test station, the warble control program, the artificial insemination (AI) data program, the livestock predator indemnity program and the research and development program.

Branch staff participated in extension meetings, farm visits, media presentations, field days and responded directly to many other requests for service. These activities continued to represent the major individual time commitment by individual members of branch staff.

The semen evaluation laboratory handled 900 samples of semen from various species during the year. Samples were evaluated for total sperm count, percent motility, total mobile sperm, morphology and per cent intact acrosomes.

The AI data program introduced in 1980 continued, with a grant of $1 being paid for each insemination reported by a licensed inseminating businesses. A total of $19,022 was paid to 23 participating businesses during the year. The branch continued to provide technical assistance at AI schools at the three agricultural colleges.

In 1985-86, 175 producers completed the weaning phase of the federal-provincial beef ROP program. The continuing drop in number of participants over the past 10 years has now slowed. Recent changes to the program have simplified procedures for producers who are now generally more satisfied with the program. There is still some resistance to enrolling because part of the program relating to estimated breeding values is still not available, reliance on the mail delays turnaround time, and because of uncertainty over the cost recovery policy currently being discussed by Agriculture Canada. It should be noted that many purebred producers are participants in breed association ROP programs.

The branch continued to provide municipalities with technicians under the beef ROP weight supervision program. Under this program, which assists producers in recording fall weaning weights and spring yearling weights, a total of about 28,000 head of cattle on about 500 farms were weighed at a cost of $31,000 to the department.

Twenty-four private groups conducted central bull test station programs in 1985-86. Approximately 2,900 bulls were evaluated for growth rate from weaning to approximately one year of age at these stations. All stations received assistance from department staff. This assistance ranged from weight supervision to general publicity, to the calculation and distribution of results. The branch continued to supervise the operation of the

Alberta Beef Cattle Test Station at Ellerslie. Two hundred bulls were included in this year's test, and more than 200 bulls were turned away because of lack of space.

The Alberta young sire proving program provided a grant of up to $750 per beef bull that completed a progeny test conducted by a recognized testing agency. One progeny test group had an active program and received grants totalling $5,625 during the fiscal year.

The sheep ROP home test enabled producers to evaluate wether, ram and ewe lamb rates of gain from birth to 50 and 100 days of age. A ewe index based on productivity was also provided. Purebred enrolments in the program continued to increase slowly with 60 producers enrolled during 1985. A new computer system was introduced during the summer of 1985 to reduce the problem of slow turnaround times.

The Alberta sheep ROP test station completed its eleventh year of operation in 1985. Thirty-eight breeders entered 202 rams in the 56 day growth test conducted at the test facilities on the Olds College campus. Average daily gains were the second highest and sale prices were the highest in the history of the station. In 1985, the second year of wool breeds testing was conducted by the branch at the Olds College facility.

For the second consecutive year, Agriculture Canada health inspectors recorded that only 2 per cent of beef carcasses were infested with warble grubs in the February to May period. This compared with 5 per cent in 1983, 14 per cent in 1980 and 44 per cent in 1968 before the warble control program began. The department continued to share 60 per cent of the warble control program costs with local governments; the latter were responsible for monitoring local sources of infestation and enforcing the regulations.

In 1985, the branch continued responsibility for the black fly abatement program. The purpose of this program, which operated in close cooperation with agricultural service boards in the County of Athabasca, and I.D. #18, and Alberta Environment, was to develop methods of relieving livestock from black fly attacks in particular areas. Program activities included the use of larvicides, testing and demonstration of new pesticides and methods of applying them to cattle, and detailed monitoring of adult black fly activity.

Agricultural service boards received grants totalling $56,068 to cover 60 per cent of the costs of programs in which they undertook to promote improved livestock production practices in their districts. Grants were available for demonstrations, field days, extension programs and for purchase of equipment for loan or rental to livestock producers to encourage adoption of new production practices.

Alberta livestock breeders received assistance to participate in major international class exhibitions outside the province. In 1985-86, 297 exhibitors received $122,035 of assistance to exhibit and show 1,160 animals in seven international class shows.

The major functions of the nutrition section of the branch continued to be to provide nutrition and feeding management information, diagnose the causes of nutrition-related problems and recommend changes to feeding programs to producers, veterinarians and the feed industry. In addition the section provided support services to department staff.

The ration advisory service and feed testing program also continued to provide feeding and management information directly to producers and agribusiness. The feed testing lab also undertook analysis of research samples. In 1985-86, a total of 17,273 feed and plant samples were analysed at the Agricultural Soil and Feeding Test Laboratory (ASFTL), compared with 19,226 in 1984-85. Of this total, 21 per cent were regular producer samples, 13 per cent were diagnostic (demonstration) samples submitted by department staff and 66 per cent were research samples. The proportion of samples in each category were about the same as in 1984-85.

The number of requests for detailed ration recommendations for samples submitted to ASFTL declined to 238 from 338 in 1984-85 and 427 in 1983-84. These figures do not include feeding programs developed on samples analysed at private labs and recommendations made by regional staff.

An interest in game ranching remained high even though regulations to govern this new industry have yet to be introduced. A number of producers now own elk under a variety of existing game laws. Demand for breeding stock is high. Bison farming also continued its recent growth trend. The branch provided extension services to the industry and assisted in the organization of a provincial association of game growers.

The livestock predator indemnity program, which provides compensation to producers for loss of domestic livestock resulting from wild predator attacks, paid for claims totalling $179,000. This was considerably less than claims have been in the past few years.

The branch's active involvement in research and development continued in 1985-86. Projects conducted included forage utilization; near infrared reflectance analysis; new methods of determining acid detergent fibre and acid detergent insoluble nitrogen in grains and cereal silages; canola meal use; on-farm mixing of swine rations; nutrient composition of canola meal; forage sampling techniques; nutritive value of hulless barley for swine; effects of barley bushel weight and processing method on feedlot performance; triticale based rations on the feedlot; effect of rumensin and bovatec in the feedlot; effect of repeated implanting on bulls from weaning to slaughter; effects of double dose of Ralgro on steer gains in the feedlot; influence of energy level on the conception rate of sows; comparison of the fertility of frozen semen, fresh semen and natural service in sows; heat synchronization for controlled cattle breeding; effect of treatment and time of treatment on feedlot performance; estimation of production loss and costs resulting from pinkeye, foot rot and pneumonia at pasture; efficacy of Precon PH vaccine; evaluation of technician and site differences in backfat thickness measurements in pigs; relationship between age, body weight, scrotal circumference and backfat thickness of bulls in test stations; factors affecting milk volume determinations on farm; effect of seeding rate on fababean yield; statistical analyses of a variety of ram test station data to determine efficacy of present test procedures used; and the effects of breed of sire, sex of lamb and type of birth and rearing on lamb weight gains.

DAIRY DIVISION

The dairy division assisted dairy producers and processors through inspection, consultation and demonstration to ensure the economic production and processing of legal, safe and wholesome dairy products. The division supported and encouraged industry to manufacture new dairy products and to expand the processing of value-added products.

In support of the department's regionalization in delivery of extension programs the division provided co-ordination, training, resource information and services to regional staff.

A comprehensive analysis and update of regulations pursuant to The Dairy Industry Act was completed. Included are those matters of public health concern previously enforced by the division under regulations of The Public Health Act and an adjustment to the milk grade and price program. The latter includes somatic cell numbers as an additional factor in the program and alters enforcement procedures to meet requests by producers for a more practical application of the requirements.

The division continues to support Alberta Dairy Herd Improvement Services and provides data control and computer analyses of production records.

Dairy Production Branch

The dairy production branch conducted the dairy farm inspection program, provided resource information and material to the regional delivery system and was responsible for developing, co-ordinating and evaluating provincial dairy extension programs. It also provided milk recording data control and record interpretation advisory services.

Producer numbers in Alberta continued to decline during the year. A net loss of 55 herds left a total of

1,583 milk producers of which 1,473 were certified and 110 met industrial milk requirements.

The dairy production home study course continued to be popular in Alberta. Over 800 copies have been distributed at a cost of $30 per course.

A film was developed on condition scoring of dairy cattle. Condition scoring can be an effective tool in managing Alberta dairy cattle.

Several factsheets were prepared on milking management, somatic cell counts, mastitis prevention and control, and one whey disposal on land. A publication called *Stray Voltage* resulted from the 1984 study on Alberta dairy farms.

Numerous extension meetings were attended by branch staff. The fourth annual Alberta Dairy Seminar was held, which was jointly sponsored by the University of Alberta, the Alberta Milk Producers' Association and Alberta Agriculture. Internationally recognized experts in mastitis control, milking machine function, forage production and dairy nutrition provided participants with the most up-to-date research and technical information available. Registered attendance exceeded 150.

The newsletter, *Alberta Dairy Producer*, was published monthly providing information on production, marketing and research matters. Staff training was increased.

The branch co-operated with Alberta Dairy Herd Improvement Services in extending the dairy herd improvement program to 826 herds. During the year 68,186 cows were tested, an increase of more than 3,000 cows compared with 1984.

Production per cow increased to 6,803 kg (14,998 lb) of milk, an increase of 351 kg per cow over the previous year.

Participation in the supervised option increased by 32 to 113 herds at year end.

Fees, as determined and administered by Alberta Dairy Herd Improvement Services, remained unchanged at $5 per cow for owner-sampler and $18 per cow for supervised service.

Preparations and training of staff concerning the new national milk recording program were initiated to ensure that conversion to the new system is completed in 1986.

Inspection and advisory services were provided to Alberta dairymen in the areas of milk quality, milk production, equipment standards and construction or upgrading of dairy facilities.

Farm inspections totalled 3,690 and another 896 advisory calls were conducted. A total of 40,406 milk samples were analysed in order to monitor milk quality on Alberta dairy farms. Of this total only 4.8 per cent of the samples exceeded the bacteriological quality standard for raw milk.

The number of violations under the milk grade and price program continued to decline to 273, down from 318 during the previous year.

Dairy Processing Branch

Dairy processing specialists inspected each dairy manufacturing plant regularly, collected samples for laboratory analysis and submitted the results to the branch, the respective plants, and health officials. Unsatisfactory reports were followed up by special inspections and detailed discussions with plant personnel.

Virtually all freshly processed milk from plants in Alberta complied with health standards, and 80.5 per cent of products sampled at processing plants met acceptable standards under "stress" testing. Increased emphasis was placed on extending keeping quality. Fluid and cultured products were tested microbiologically following seven days' storage in an environment designed to simulate conditions in a typical household.

Annual plant inspections were conducted jointly by provincial and federal inspectors. Each plant received a numerical rating thus enabling an intra-and inter-provincial comparison. Alberta's provincial rating remained the highest in Canada. The following table illustrates the high standards in Alberta dairy plants for the last three years.

ALBERTA DAIRY PLANT RATINGS COMPARED WITH THE NATIONAL RATINGS

	1983	1984	1985
National average plant score	82.2	82.3	82.7
Alberta average plant score	88.0	87.5	88.1
Lowest scoring plant in Alberta	72.7	76.7	77.4
Highest scoring plant in Alberta	99.4	98.9	99.6

The certification of dairy plant employees in Alberta continued at a high level because of continued efforts by dairy processing specialists and a substantially lower level of plant employee turnover.

Analyses of bulk milk received at Alberta dairy plants were conducted to prevent milk containing inhibitors from entering the system.

Bulk milk grader training and surveillance were maintained.

Dairy manufacturing plant licences issued in 1985 totalled 40.

Two new fluid milk plants commenced operation during the year.

Surplus fluid milk focused attention on industrial milk processing, especially cheese manufacture. A large variety cheese manufacturing plant started operational testing at year end. One small cheese plant was closed in 1985.

A major cheese cutting and packaging facility was relocated.

The cheese and cultured dairy products specialist continued to work with the cheese sector to update technology and maintain quality.

Increasing emphasis was placed on cultured dairy products with the objective of improving quality. Attention was also given to processing methods and equipment. A project was developed to use the facilities at the Food Processing Development Centre to investigate the use of new technology in the manufacturing of yogurt.

ANIMAL HEALTH DIVISION

Division programs and services delivered by staff included laboratory procedures, inspection of meat and livestock, consultations and the presentation of extension information. The purpose of division programs and services was to improve disease detection and control, assist in the production of safe quality food products and to enforce the legislation assigned to the division.

During the year the new Veterinary Profession Act was proclaimed and revised regulations were approved.

Because a considerable amount of grain was left in fields over winter, grain samples were collected and analysed to determine if mycotoxins were present. All samples analysed by either the federal laboratory or the toxicology laboratory were negative for mycotoxins.

Several herds of cattle in north central Alberta were found to be affected by tuberculosis, although no previous cases had occurred in Alberta for several years.

Rabies was found in nine skunks and four bats. One positive testing skunk was in the County of Newell, one in the Municipal District of Cardston and the rest in the County of Warner. Population reduction efforts were successful in limiting the outbreaks. Further research was done relative to the impact of population reduction methods on skunk populations. Research on the biology of bats and the interaction with rabies was also carried out.

Grant funding was provided for the Alberta Society for the Prevention of Cruelty to Animals, although budget restrictions prevented any significant increase.

Co-operation with Alberta Manpower continued in order to fund and administer the summer work experience program for veterinary students.

Meat Hygiene Branch

Inspection was provided for 78 red meat plants and 85 poultry plants including 77 operated by Hutterite Colonies.

Livestock inspected during the year included 42,472 cattle, 74,837 hogs, 6,100 sheep, 1,393 goats, 106 buffalo, 18,270 rabbits, 2,239,318 broiler chickens and 254,011 fowl and 129,719 ducks, geese, turkeys and pheasants.

Cattle slaughter decreased marginally from previous years and hog slaughter increased marginally. All other classes of livestock showed a significant increase in volume.

Carcass condemnations for the year were approximately 1 per cent for cattle, 0.76 per cent for hogs, 0.5 per cent for sheep, 1.75 per cent for goats, and 1.8 per cent for poultry. In addition 150,383 meat portions were condemned.

Enforcement activities continued during the year with approximately 50 possible violations being investigated. Most were found to be either not in violation or if in violating, were persuaded to cease their activities. One charge was laid under The Meat Inspection Act, and a conviction was obtained. Other cases are still under investigation.

During 1985, amendments to the meat inspection regulations were passed, which allowed the Minister to give permission to individuals to operate as mobile butchers. These persons are permitted to travel from farm to farm and slaughter animals on behalf of the farmer for that farmer's own use. The meat is not inspected, nor is it eligible for sale. During 1985, 32 permits were issued.

Livestock Predator and Beeyard Compensation Programs

These programs were administered by the division. Decisions concerning compensation were made by committees operating in the Peace River district for claims from that area, and in Edmonton for claims originating in the balance of the province. The committees consisted of representatives from the animal industry division, crop protection and pest control branch, animal health division, fish and wildlife division, plant industry division and farmers or beekeepers actively engaged in livestock production.

The programs compensated farmers suffering livestock losses though predation and beekeepers suffering bear damage.

The following table summarizes the claims processed, moneys distributed and a breakdown of claims for the fiscal year 1985-86.

	Predators	Beeyards
Claims	730	31
Rejections	170	13
Approvals	560	18
Monies Paid	$172,307.95	$5,364.80

Predator Claims

Bears	Coyotes	Wolves	Others
59	401	44	56

Health Management Branch

The major responsibilities of the branch were the prevention and control of diseases in livestock herds, the administration of legislated animal health programs, safeguarding human health by the control of designated diseases, and the enforcement of regulations for the sale of livestock medicines. Techniques for disease prevention and improved production were emphasized to livestock producers and veterinarians in Alberta. Veterinarians in private practice were employed to

conduct auction market inspections, community pasture inspections, preconditioning program visits, and a high proportion of the visits to swine herds enrolled on the swine herd health program. In addition, veterinary practitioners were involved in some extension activities and occasional disease investigations.

The demand for extension in both the written and spoken formats remained at a high level. For the past three years, the animal health division newsletter has been published on a monthly basis. Veterinary practitioners participated in a number of extension activities and continued to rely very heavily on the branch slide and film library for resource material. This library was expanded in the summer of 1985 by employing a S.T.E.P. student. In addition, numerous telephone interviews were conducted and several articles, news releases and factsheets prepared.

Broad surveillance of disease in food producing animals was maintained by monitoring various laboratory and branch reports and by means of computer searches. More detailed information was collected for those diseases named in the designated communicable disease regulation. Appropriate action was taken following a diagnosis of each case to control the outbreak and prevent spread to other premises. All members of the branch were involved with in-depth investigations of disease problems on farms. Usually at the request of the practicing veterinarians, most of these were on premises occupied by beef cattle or swine; a lesser number involved dairy cattle.

The increase in enrolment in the commercial section of the swine herd health program was less than in previous years. As this was the first year that a number of herds completed their four-year term of enrolment, the number of resignations was considerably higher than in previous years. Branch veterinarians continued to conduct the majority of the inspections in the seedstock section, and all the initial inspections for all new enrollees in the commercial section. Regular inspections of commercial herds, however, continued to be carried out by veterinary practitioners. Enrolment on the program remained a requirement for herds utilizing ROP test station space, and inspections were conducted on all herds contributing swine to the three major shows in the province. Publication of snout and lung scores for seedstock herds continued on a semi-annual basis and these scores are now entered into a computer to calculate the average scores and variations within the group for both conventional seedstock and minimal disease herds.

The advisory committee to the program met in November when a motion was passed to look into the feasibility of a separate named category for the minimal disease herds. All livestock offered for sale at Alberta auction markets or entering community pastures continued to be inspected by veterinarians appointed by the department. The number of animals rejected remained at about one-half of one per cent of those inspected. In addition, veterinarians conducted postmortem examinations on all animals that died on community pastures during the grazing season. Although few major problems were reported, photosensitization was a significant problem in one pasture in southern Alberta.

Licensed livestock medicine outlets continued to be maintained to provide farmers and ranchers with a convenient source of certain livestock medicines. Regular supervision of these outlets was maintained to ensure that they conformed with the regulations. Proposals for the revision of the livestock medicine regulations were forwarded to the industry and livestock producer groups for their consideration.

The six provincially owned veterinary clinics in western and northern Alberta continued to provide a full range of veterinary service. Those at Edson, High Prairie and Fairview continued to be strong and viable practices whereas the clinics at Valleyview, Manning and Fort Vermilion required additional income support to maintain practitioners in these areas. A mileage assistance program was continued in I.D. 23 to encourage greater use of veterinary services.

The number of producers who participated in the Alberta certified preconditioned feeder program was similar to the previous year, however, there was a decrease in the northern and Peace River areas and an increase in central and southern Alberta. The benefits of preconditioning are now well established and consist not only of a highly significant decrease in sickness and death loss, but also of a much improved weight gain when compared to calves not weaned.

The bovine respiratory disease project funded by Farming for the Future was continued as a joint project between Alberta Agriculture and the Veterinary Infectious Diseases Organization in Saskatoon. The

objective of the study was to determine the risk factors associated with the development of respiratory disease in feedlot cattle in Alberta. Analysis of the data from the trial to assess the efficacy of a Pasteurella vaccine in cattle indicated that there may be some benefit from vaccinating calves well before the stress period. A similar analysis from the porcine parvovirus vaccine trial showed no statistically significant difference between vaccinates and nonvaccinates with regard to several reproductive parameters. A study to assess the long-term affects of the Lodgepole blowout on livestock health has suggested that calves exposed to the blowout may not have grown and developed as well as producers would have expected. The lack of detailed records, however, limited the conclusions that could be drawn from the study.

Regional Laboratories Branch

The laboratories located in Fairview, Airdrie and Lethbridge continued to provide a disease diagnosis service to livestock producers and their veterinarians in northern, south central and southern Alberta. Laboratory personnel provided a consultation service for producers, veterinarians and other government agencies. Field trips were made to investigate unusual or serious disease problems. Staff veterinarians participated in extension programs relating to animal health concerns.

Veterinarians at the three laboratories co-operated with fish and wildlife personnel investigating health problems in fish and wildlife, and assisted predator control officers in their investigations.

The Fairview laboratory provided instruction to student animal health technicians at Fairview College and the Northern Alberta Institute of Technology. The Airdrie laboratory provided instruction to students from Olds College.

Personnel from Airdrie laboratory participated in a special project to study pneumonia in calves in feedlots.

Some unusual health problems in cattle related to poor quality feed and less than adequate amounts of feed that resulted from bad weather.

The early onset of winter for the second consecutive year resulted in considerable acreages of grain left unharvested in the Peace River region. There was some concern that this grain might be unsuitable for animal feed when harvested in the spring. Personnel from the Fairview laboratory participated in a study conducted to investigate this matter.

Reference Laboratories Branch

The branch continued to provide laboratory support services to division pathologists and field veterinarians, other institutions, veterinary practitioners and livestock producers. The services were provided in the disciplines of toxicology (toxicoses, nutritional deficiencies and clinical chemistry), electron microscopy and histopathology (pathology at the cellular and subcellular level), serology (surveillance of the immunity status in herds or flocks or exposure status to disease causing agents) and virology, bacteriology, mycology (these involve disease causing agents such as viruses, bacteria and fungi).

Extensive changes took place in the toxicology section, where certain functions were eliminated or transferred to other institutions. The human forensic and quality control service to the ALCB were discontinued. This allowed the section to concentrate on province-wide service functions for agricultural purposes, veterinary toxicology and farm water analysis.

The primary concern in 1985 was the potential for the presence or production of mycotoxins in overwintered grain in the Peace country. Monitoring for mycotoxins was a major commitment in the early part of the year, while promotion and institution of a new and efficient farm water analysis service formed a major commitment in the latter part. Developmental work for new or modified protocols was a high priority throughout the year.

The histopathology-electron microscopy section continued to provide province-wide service in electron microscopic diagnosis. Developmental and research aspects were emphasized. Several successful projects led to the incorporation of better diagnostic tools for use in this section.

Virology-serology section personnel faced much increased demands for serology service from the entire province. Demand for serological service for bovine leukosis virus continued unabatedly. A television video was prepared explaining the monitoring procedure to use with trapped mosquitoes to detect the presence of western equine encephalomyelitis virus (sleeping sickness).

Bacteriology-mycology staff streamlined functions in the laboratory to accommodate a decrease in through-the-door diagnostic submissions and an increase in disease investigation and practical research or project-related submissions. Significant progress was made in the identification of a greater variety of *Mycoplasma* species and *Leptospira* serovars.

The branch handled 70,234 diagnostic specimens which constituted an 11 per cent decrease compared with 1984. Major decreases were apparent in toxicology (human submissions) and the disciplines of virology and bacteriology. The decrease in number of diagnostic specimens allowed expansion of disease investigation associated and method developmental work.

Pathology Branch

The pathology branch provided animal disease diagnostic services to livestock owners, their veterinarians, a variety of scientific institutions and to the rural and urban public. The service was designed to provide rapid, accurate technical results to aid producers in reducing losses from clinical or subclinical disease. Test results for most of the submissions were reported to the private veterinary practitioners to assist them in providing professional services on a local level. The branch processed 9,633 submissions in 1985, a decrease of 1.85 per cent from the previous year.

Several applied research projects were undertaken including an investigation into catalyst altered water and acute death syndrome in broilers. Melatonin implants were tested in mink and as a preliminary study in foxes. A diagnostic trial was run on transmissible gastroenteritis in pigs, and bacteriology-sensitivity testing was evaluated in feedlot cattle in co-operation with other branches and industry.

Extension activities included lectures on a variety of disease topics, production of seven factsheets and three scientific articles. A system of electronically filing reported cases using a computer was begun.

1985
1986

FIELD SERVICES

FIELD SERVICES

The field services sector with its network of district agriculturists, district home economists and regional specialists, was the principal means through which the department provided technological information and services to improve the profitability of farming and help maintain the quality of rural life.

To meet local needs, information and services were provided through a network of district offices, administered through regional offices at Lethbridge, Airdrie, Red Deer, Vermilion, Barrhead and Fairview.

The sector also included the home economics and 4-H division and the engineering and rural services division. Effective December 1, 1985, they were amalgamated to form the rural services division. Also created in the amalgamation was the agricultural education branch which was a consolidation of the former extension services branch, the farm safety program and the agricultural manpower program. The agricultural and community services branch incorporated the department's work with agricultural service boards, agricultural societies and agricultural development committees.

Sector staff continued to emphasize the economic aspects of agricultural production in their extension activities. Of particular note was the introduction of the "Gear Up Financially" courses conducted by district agriculturists, district home economists and regional farm economists in co-operation with the farm management branch.

District staff were called upon to administer the delivery of a large number of special financial assistance programs. This contributed to a much larger than usual number of people coming into the department's district offices, along with a significant increase in the number of telephone enquiries.

RURAL SERVICES DIVISION

The rural services division carried out diversified educational programs and services to assist in improving the quality of life in rural communities and in maintaining and developing viable farms. Financial management received increased emphasis.

During the year, the home ecomonics and 4-H division and the engineering and rural services division amalgamated to form the rural services division. The five branches provided advisory services and central program support for agricultural education, agricultural development committees, agricultural engineering, agricultural service boards, agricultural societies, green certificate, 4-H, home economics and farm safety.

Division staff participated in the development and production of two films, *When Murphy Goes Farming*, dealing with stresses farm families face and *The Rural Boardroom*, which deals with how farm families can use business meetings for long and short term planning as well as making day-to-day management decisions.

Staff training programs continued to emphasize communication skills.

The division assisted members from Alberta farm women's organizations to attend the Second National Farm Women's Conference. Program grants were given to the Alberta Women's Institute and Women of Unifarm. Grants were also given to 4-H clubs, councils and alumni to assist them with their programs and operations.

The agricultural law program informed the agricultural community about laws that affected them. Emphasis was on the preventative approach with producers organizing their affairs to avoid serious legal and financial troubles in the future.

The areas dealt with were: contract law (mortgages debentures, personal guarantees, sale agreements, leasing agreements), insolvency (foreclosures, receiverships, bankruptcies), farm taxation, estate planning (capital gains, retirement planning, property ownership, family harmony, wills), estate administration, farm business arrangements and organizations, divorce and matrimonial property law and how it affects the farm, property disputes (fence line problems), surface rights and mineral laws, trespassing law, laws relating to animals, and negligence and contractual disputes relating to agriculture (chemical application, fertilizer application, poor seed).

The goals of the agricultural law program were achieved using several methods: 168 seminars,

numerous publications, 19 magazine columns, 2804 individual office or telephone consultations, and interviews with newspapers, magazines and television and radio stations. Individual consultations ensured that information given through public forums was fully understood by the individuals.

The water well recovery program provided grants of $20,663 to eight farm applicants.

Home Economics Branch

The home economics branch, through its network of district home economists, provided a variety of educational opportunities to its clients. Financial management for farm families was a major focus for research and extension. "Gear Up Financially" workshops offered farm couples information and assistance in developing plans for the overall organization and management of their farm business. Family resource management specialists designed and district home economists presented lessons on values and goals, decision making and farm family expenditures.

Objectives, guidelines and resource materials for the farm accounting assistance program were developed. District home economists provided in-depth assistance through one-on-one counselling and small group meetings focusing on farm record keeping, setting up a farm office, filing systems and financial security.

In conjunction with the department of rural economy at the University of Alberta, a Farming for the Future project on farm family expenditures was implemented. The project, FAMEX, involved all district home economists. More than 400 farm families began keeping track of their 1986 living expenses and receiving information on home and farm record keeping.

As farm women take on increasing responsibilities on and off the farm, time management becomes a concern. A series of seven newsletters, *Farm Women at Work: Managing Roles On and Off the Farm*, was written for distribution through district home economists.

Aimed at increasing sales of Alberta processed foods in rural Alberta, the rural agricultural products promotion (RAPP) program was carried out in 14 districts. This three year program is a co-operative effort between the home economics branch, the marketing sector and the Alberta Food Processors Association. Although projects varied, all consisted of three basic components: support of retailers in the community, in-store food promotions and media advertising. District home economists reported positive response from consumers to the promotion. Increased activity by branch staff in agricultural marketing and promotion was evident with almost a 100 per cent increase in the number of individual contacts made and educational programs conducted in this area over the past year.

The nutrition at school program reached over 45,000 children attending 213 elementary schools. Work began on developing teaching resources featuring Alberta grown and processed foods. Correlated to the Alberta health curriculum the new resources for division one will be ready for use in fall 1987.

Three nutrition education microcomputer programs were developed and distributed by the home economics branch to 440 schools.

Extensive programming and resource development in protective clothing for pesticide use continued. The Farming for the Future funded research, *Limited Pesticide Exposure Through Textile Cleaning Procedures and Selection of Clothing*, provided useful information to clothing and textiles specialists and district home economists for distribution to primary producers. Preliminary research was started to assess the use of disposable coveralls for pesticide handlers.

The use of geotextiles for weed control to improve water quality in dugouts was initiated and resulted in a Farming for the Future on-farm demonstration. Implemented in region 6, the project is a joint effort of the provincial clothing and textiles specialist, a district home economist and a regional engineering technologist.

Historically, foods and nutrition has been the area of highest individual client contacts and educational programs presented. In addition to the 740 programs conducted, district home economists and foods and nutrition specialists prepared 900 newspaper columns and set up 115 displays which focused on some aspect of foods and nutrition exclusive of nutrition at school or RAPP.

The branch's home economics test kitchen opened in

Edmonton in December. Services provided by the kitchen to Alberta food processors and commodity groups include developing and testing household size recipes, writing and editing recipes for packaging and publications, and advising on storage and use of products. In its first four months of operation, recipes were developed and tested for two flour mills, two home economics branch publications, nutrition at school newsletters and the Farmers' Market Calendar.

Foods and nutrition specialists prepared several publications to support the branch's priorities: *Saving Time and Money in the Farm Kitchen, Food Drying: A Beginners Guide,* and *Popular Pickle and Relish Recipes.*

In addition to the client contacts reported in the accompanying chart, home economics branch staff made contact with an additional 265,000 people at such special events as agricultural fairs, 4-H achievement days and farm and rural organization conferences.

Much of the work of staff engaged in home economics extension was done in collaboration with other department staff and related public and private sector organizations. Across the province, home economics branch staff attended 1,537 advisory meetings with clients and others outside the department.

4-H Branch

The 4-H branch served a clientele of 7,661 4-H members and 2,320 leaders associated with 494 clubs. Project enrolment was 8,415, due to some members taking more than one project. Membership decreased by 7.8 per cent from 1984-85. The individual project remained the focal point in the 4-H program. Thirty-one projects were offered, the most popular being beef with 40 per cent of the membership. Light horse was the second most popular project and continued to gain members.

In 1985-86 the 4-H program emphasized four areas: project revision and development, promotion of 4-H (including member and leader recruitment), the delivery of support and training to adult volunteer leaders, and increased emphasis on communication training as a component of personal development.

Materials revised by the 4-H branch included educational manuals in the junior leadership, light horse, beef and dairy projects; bluebird nestbox unit, community resource manuals and the treasurer's book. Staff prepared and distributed the following materials to assist leaders and members: a public speaking organizers guide called *Steps in Preparing a Speech,* a club leaders checklist, and promotion kits.

The promotion campaign, "Ridin' Hi with 4-H", continued this year through the use of buttons, stickers, radio and television announcements. There were 4-H displays at local fairs, schools, malls, Ag Expo and International Youth Year (IYY) conferences. Harley Read, the 1985 Premier's Award winner toured the province on a media blitz. In 1985-86, 301 4-H leaders participated in the Alberta 4-H leaders' conference held in Red Deer. Three long time 4-H leaders were inducted into the 4-H Hall of Fame. Thirty-three 4-H leaders were selected to represent Alberta at national and international leader training/recognition programs.

Provincial programs generally saw an increase in delegate participation. One hundred and forty-two senior 4-H delegates attended the provincial 4-H selections program which featured the theme, "The Choice is Yours". Sixty-three delegates initially received award trips to attend provincial, national and international programs. Nine other delegates were later named to participate in the operation enterprise program in Langley through the support of a new sponsor to 4-H, Alberta Energy Company Limited. The 4-H branch nominated outstanding 4-H delegates for the International Youth Year youth achievement awards, and selected 4-H delegates to participate in several IYY programs at the national and international levels.

The two provincial Club Weeks attracted 250 4-H members. Members attending communication festivals totalled 212. Many of the graduates of this program served as resource people for communication workshops in their communities. Almost 90 per cent of the 4-H clubs participated in the annual highway cleanup, cleaning 4,731 miles of roadside. 4-H clubs were involved in other community projects including parks cleanup, the Steve Fonyo Run and the Alberta Forestry co-ordinated "Use Respect" project, a pilot project in two areas.

HOME ECONOMICS BRANCH
STATISTICAL PROFILE OF
SUBJECT AREA ACTIVITIES (PROVINCIAL TOTALS)

SUBJECT AREAS OF CONTACT	OFFICE INTERVIEWS	FARM VISITS	LETTERS	TELEPHONE CALLS	TOTAL INDIVIDUAL CLIENTS	EDUCATIONAL PROGRAMS NUMBER OF PROGRAMS	EDUCATIONAL PROGRAMS PROGRAM ATTENDANCE
NUMBER OF CLIENTS	25,351	3,012	22,428	63,086	113,877	2,551	63,273
FOODS AND NUTRITION	7,087	249	4,808	21,553	33,697	740	14,791
NUTRITION AT SCHOOL	1,319	701	3,626	5,423	11,069	458	11,963
PUBLIC RELATIONS AND REFERRAL	2,109	236	2,585	6,114	11,044	70	2,875
CLOTHING AND TEXTILES	2,052	209	1,938	6,619	10,818	373	7,571
FINANCIAL MANAGEMENT	2,396	761	3,870	3,662	10,689	399	8,628
4 - H	2,925	174	2,589	4,611	10,299	195	7,389
FURNISHINGS AND EQUIPMENT	1,132	68	667	4,845	6,712	60	1,108
FAMILY / PERSONAL DEVELOPMENT	1,462	94	1,199	3,167	5,922	209	5,730
AGRICULTURE RELATED	2,710	83	337	2,745	5,875	48	1,305
HOUSING	1,319	443	470	2,479	4,711	61	1,911
AGRICULTURE MARKETING AND PROMOTION	1,281	82	468	2,209	4,040	47	2,432
DESIGNATED PROGRAMS	140	143	311	410	902	45	786

■ = 2,500 CONTACTS

FIGURES FOR "NUMBER OF CLIENTS" MAY EXCEED "TOTAL INDIVIDUAL CLIENTS".
ONE CLIENT MAY BE CONTACTED ON MORE THAN ONE SUBJECT AREA.

YEAR:
APRIL 1, 1985 TO
MARCH 31, 1986

Sixty-five 4-H delegates from across Alberta attended conservation camp where they dealt with several environmental topics. The provincial beef and heifer show attracted member delegates from 40 Alberta 4-H clubs. Twenty-one 4-H clubs participated in the dairy show. The horse sense and expressions programs had 370 members and leaders participate. Alberta 4-H delegates participated in the Alberta Dairymans' Association annual meeting, the Annual Dairy Conference in Madison, Wisconsin and Agribition in Regina, Saskatchewan. Ninety-one members were trained at the "leadership through counselling" seminar. These 4-H'ers then applied their skills as volunteer camp counsellors at 16 junior summer camps involving 994 4-H members.

Scholarships valued at almost $25,000 were awarded to 32 4-H members. Two new scholarships were introduced: the Her Majesty Queen Elizabeth the Queen Mother scholarship and the 4-H Foundation Memorial scholarship.

Twenty-four years of *4-H Clubtime* television episodes were catalogued and transferred to video cassettes and made available to 4-H clientele. Over the past year 26 episodes of *4-H Clubtime* were aired over CBC and via satellite over the ACCESS network. Fifty-two episodes of *4-H News Roundup* radio programs were broadcast over 23 stations and 13 radio transmitters.

4-H staff conducted workshops and training seminars on: leadership skills, communication training, club operation, farm safety, stress management, personal development and project skills, and judging. Client groups involved in workshops and seminars included agricultural societies, women's institutes, the rural education and development association, agricultural service boards, and 4-H members, leaders and parents. In addition, regional fairs, winter camps, 4-H awareness sessions and family activities were co-ordinated by staff.

Staff continued to liaise with district, regional, provincial and national 4-H councils; the 4-H Foundation of Alberta, 4-H alumni clubs and the Alberta Rural Youth Association (ARYA). Delegates were selected to attend rural youth conferences throughout the world and host delegates from other provinces and countries.

4-H staff provided input to, and drew resources from, over 19 other government departments, plus numerous community organizations. Staff recruited adult volunteers to act as leaders and guest speakers and to act as resource workshops. 4-H staff contacted numerous individuals, organizations and companies who provided sponsorship in the form of materials, staff support and funds.

4-H BRANCH CLIENT CONTACTS

1. Educational/Consultative Activities Involving 4-H Clients

Topic	No. of Events	Attendance
4-H Administration	80	544
Projects	355	28,106
Personal Development	56	1,612
Communications	41	1,773
Camping	61	2,626
Leadership	170	3,021
4-H Promotion	106	6,884
Other	87	2,304
TOTAL	956	46,870

2. Client Contacts

Office Visits	2,849
Telephone	22,590
Letters	6,144
Mail-Outs	1,075
Copies Circulated	40,575

3. Media

Type	No. of Releases
Radio	212
Print	564
Television	48

4. Major Meetings

Type	No. of Meetings	Attendance
Club	18	391
District Council	117	2,994
Regional Council	40	742
Provincial Council	11	121
Project/Non-Project	66	881
Fair Boards/Agriculture Societies	57	622
Other	59	850

ALBERTA 4-H CLUB MEMBERSHIP BY PLACE OF RESIDENCE

	Female	Male	Total	
Farm	3,185	2,727	5,912	(77%)
Rural Non-Farm	608	279	887	
Urban	646	216	862	
TOTAL	4,439	3,222	7,661	

Total number of clubs = 494
Total number of members = 7,661
Total number of adult volunteer leaders = 2,320
Average age of 4-H members = 13.0 years
Average tenure of 4-H members = 2.87 years

SUMMARY OF 4-H CLUBS BY PROJECT

Club Project	No. of Clubs
Beef	185
Canine	1
Clothing	20
Computer	6
Crafts	6
Dairy	16
Field Crops	1
Foods	8
Horticulture	3
Light Horse	88
Multi-Project	141
Outdoorsman	2
Pheasant	2
Photography	2
Rabbit	1
Sheep	6
Small Engine	3
Swine	2
Vet. Science	1
TOTAL	494

Agricultural Engineering Services

In response to the extremely dry conditions across the province in 1985 the department launched an emergency farm water assistance program. The program provided financial assistance to farmers developing more permanent water supplies. It provided grants for farmers building new dugouts and stock watering dams, matching the existing Prairie Farm Rehabilitation Administration (PFRA) grants available for this purpose. Additionally, it provided grants (covering one-half the cost up to $1,000) for farmers wishing to rehabilitate existing dams and dugouts. There were 1,600 individual grants paid out to farmers under the program which proved so popular that it was extended into the next fiscal year.

The emergency program complemented the branch's dugout pumping program which was again expanded to meet the problems created by the extreme dry conditions. Over 600 farmers were assisted with the average pumping distance requiring more than one unit to complete the work. All of the requests received were serviced. This is at least partly due to the successful repair and maintenance program which was begun last year. Both of the water programs were operated in close co-operation with PFRA and Alberta Environment.

Publications remained a major thrust of the engineering specialists. The build-your-own series was expanded and a new series, *Lube Notes*, was initiated. A ventilation handbook was the major release last year. It was published to coincide with a week long ventilation seminar conducted by the branch in co-operation with Lakeland College for ventilation contractors throughout the province.

The traditional skill training program covering welding, mechanics, hydraulics and electrical subjects was expanded by offering a computer awareness course. The course, dubbed "Computers on Wheels", was a co-operative venture with the University of Alberta, IBM and the farm business management branch. The expanded program reached a record number of farmers with well over 1,300 attending the courses throughout the winter.

The number of farmer complaints lodged under The Farm Implement Act decreased last year. This was possibly due to a reduction of sales of new farm equipment. Concerns regarding repair parts availability led all of the other complaints. The computerization of the licensing system was nearly completed and resulted in earlier and more complete licensing of dealers and distributors than was possible in former years.

The demand for information provided by the Canada Plan Service remains strong despite the economic downturn. Increasing numbers of farmers and building suppliers are requesting detailed information available on the plans. Over 4,000 individual plans were supplied through regional and district offices throughout the year. Remodeling design assistance requests for farm homes remained high with kitchen layout changes being a major concern. Sixty individual designs were supplied along with information on techniques and construction methods.

Our engineers actively worked with the Association of Seed Cleaning Co-ops, assisting with design improvements and renovations.

Co-operative applied research projects were instigated with both Lakeland College and Olds College dealing with grain handling and feed processing problems. Also, a tractor efficiency demonstration was planned in co-operation with Olds College for the 1986 summer extension activities.

The agro-electronics show was held in conjunction with the Smoky River Agricultural Trade Fair in Falher this year. The 12 seminar sessions offered were well attended by an estimated 2,500 visitors.

Agricultural Education Branch

The farm safety and agricultural manpower sections were amalgamated with the green certificate, home study, and agricultural education sections of the former extension services branch to form the agricultural education branch.

The branch was responsible for developing and delivering, on a provincial basis, educational programs to support the educational service activities of the field services sector.

There were several major accomplishments during the year. The first of four teacher handbooks, designed to integrate agricultural awareness education into the school curriculum, was completed and distribution was started for piloting within the school system. Alberta Manpower agreed to fund farmer trainers in the green certificate program under the Alberta training program. The branch participated in the Agricultural College

Task Force review which recommended to the Ministers of Agriculture and Advanced Education, suggestions for more effective use of the agricultural colleges. The branch head also represented the department on the Canada Committee on Technology Transfer.

The branch produced *Pride in Alberta*, a teacher's handbook designed to promote awareness of Alberta's agricultural industry in schools. It featured prepared lessons and a variety of learning activities to be integrated with the prescribed curriculum for grades four to six. A video presentation on careers in agriculture was completed and added to the department's film library.

The home study factsheet, listing some 70 courses on agricultural and rural topics, was published in October.

Three Albertans were inducted into the Alberta Agriculture Hall of Fame from the 22 nominations reviewed by the selection committee.

The objective of the green certificate program was to develop the technical and managerial skills required by those desiring to enter or continue a farming career. This apprenticeship style, adult education program continued to co-operate closely with more than 200 Alberta farmers in developing the program, conducting the training and testing, and certifying the graduates. The program offered training in dairy, beef, swine, sheep, dryland and irrigated crop production. The program operated with an average population of 180 to 200 trainees employed on training farms spread throughout the province from High Level to Warner. Seven regional farm training specialists provided program administration and provided farm labor and manpower consultation services.

Co-operation was maintained with three agricultural colleges to provide facilities for testing of trainees by farm training appointed test boards. A total of 130 certificates were issued to competent trainees during the year. In spite of the weaker farm economy, these graduates found ready employment on farms as a result of a continuing demand for skilled and qualified farm manpower.

Response to the farm safety program was, once again, overwhelming. Based on a thorough analysis of the feedback and client needs, the approach to farm safety education was changed from one of individual efforts to one of a group effort.

With financial assistance from Imperial Oil Limited, the farm safety section produced a new *Child's Guide to Farm Safety*. The publication portrayed a "high -tech" look, and was based on a unique computer format. Sixty-thousand copies of the workbooks and 120 computer diskettes were distributed to rural schools.

Farm safety continued to be essential to the programs of volunteer farm organizations such as Alberta Women's Institutes, Women of Unifarm, Alberta Association of Optometrists, Farm Equipment Dealers' Association, and Alberta Flying Farmers. In co-operation with these organizations, 285 lifesaver, fire safety and general farm safety workshops were conducted throughout the province. Approximately 8,100 people attended these courses.

The last edition of the annual farm safety calendar was published by the Farm Equipment Dealers' Association of Alberta - British Columbia. It was dedicated to the men and women of our province who have been working actively with rural communities to enhance awareness of potential farm hazards and to encourage the development of safe farming practices.

Traffic Laws for Farm Vehicles and Implements was revised to reflect the new federal and provincial legislation on transportation of dangerous goods which came into effect during the last fiscal year.

The farm safety program continued to receive international recognition by invitation for membership in the National Safety Council, agricultural division, United States, for a five year term.

The primary purpose of the home study program was to develop and maintain educational programs for self study by farmers and farm families and for use as a support resource for the delivery of extension programs in the field. One new course was developed: Crop Protection 86. A total of 3,013 registrants received the course which was supplemented by open-line radio programs and four seminars held in strategic points across the province. The Alberta soils course was revised and reprinted. Previously developed home study courses remained available for distribution. Total enrolment for the fiscal year for the 13 available home study courses was 4,046.

The agricultural manpower programs section added 22 positions under the agriculture work experience program (AWEP) to the regular program schedule. The

AWEP provides extension work experience for undergraduate agriculture students. Although the evaluation is not yet complete, this pilot program was well received, and it indicates that more programming of a similar type be employed in other areas of the department.

Responsibility continued for the administration and/or placement function for the following:

Agriculture department's element (employment programs)	183 positions
Veterinary work experience program	32 positions
Summer farm employment program	960 positions

Within the past year, over 700 unsolicited applications were received for a total of 183 available positions.

Agricultural and Community Services Branch

The agricultural services branch provided administrative and operative support to agricultural service boards and agricultural development committees. Sixty-six agricultural service boards were allocated $3,919,457 in basic grants to assist them in the execution of essential programs in soil conservation, weed control, field crops, pest control, horticulture and tree planting, livestock improvement projects, training and extension. An additional $134,888 was allocated to soil conservation projects under a federal/provincial agreement and in response to individual agricultural service board requests. Cities and towns received $52,707 in grants to carry out weed control programs.

Emphasis was placed on providing training to agricultural service boards, agricultural fieldmen, district agriculturists and board chairmen to increase their effectiveness in program planning, formulation of local agricultural policy, and staff development and supervision. To accomplish this, numerous workshop sessions were held with boards or board members across the province.

To further assist boards in carrying out their activities, four issues of the provincial agricultural service board newsletter, additional procedural outlines for the ASB planning guide, and a training opportunities calendar were circulated.

Advancing 75 per cent of the annual grant allotment to agricultural service boards on the approval of the memorandum of agreement was well accepted. Increased flexibility allowing boards to transfer allocated grant amounts from one project to another enabled them to make effective use of limited grant funds.

Provincial input into organizing, planning and resourcing regional and provincial agricultural service board conferences and training sessions for agricultural fieldmen improved communications and increased the participation of board members.

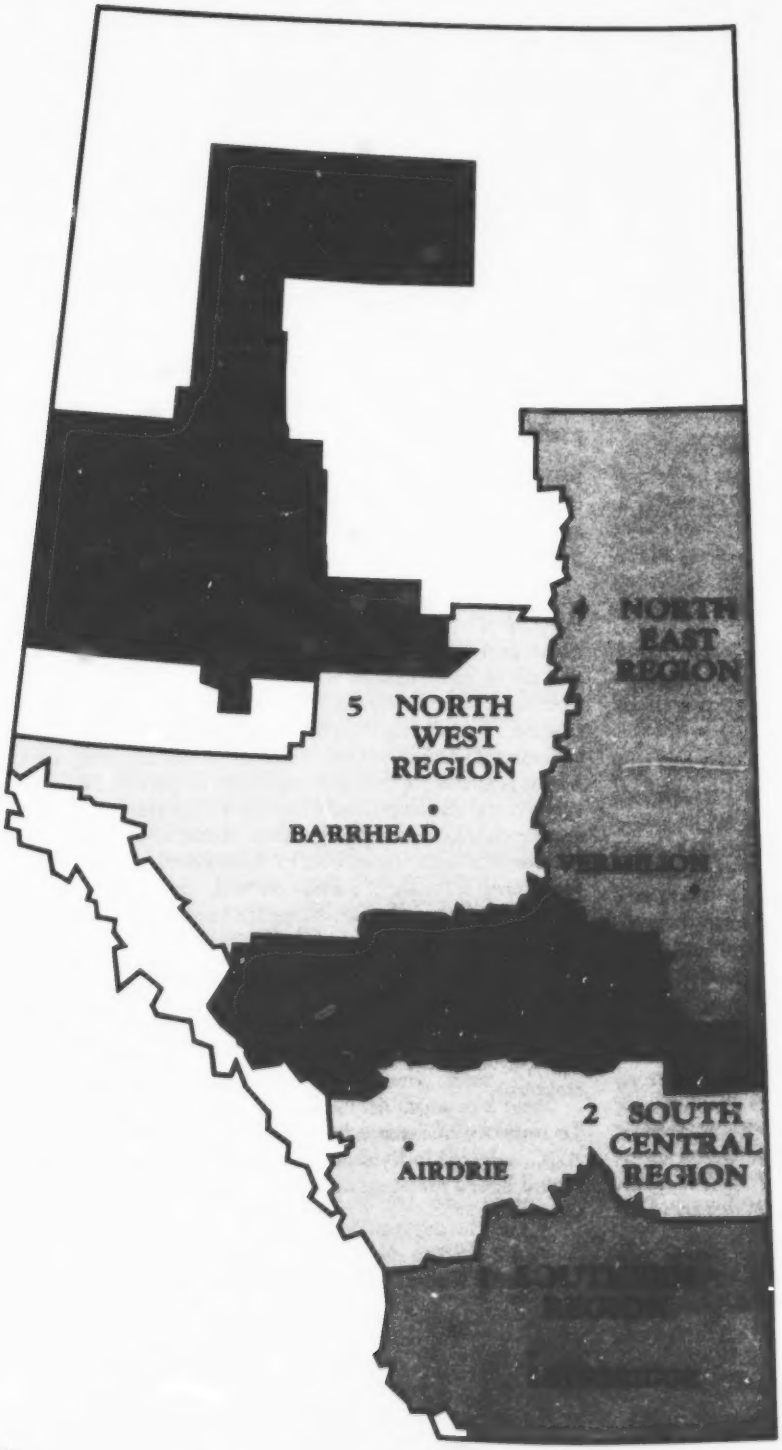
Sixty agricultural development committees provided understanding of local conditions and needs in hearing appeals on loan applications and the disposition of public land.

Committees contributed to the development of policies in Alberta by identifying program needs in rural communities, and evaluating the impact of programs and the effectiveness of the delivery system. For the first time, the contribution of individual committees relative to concerns, current situations and recommendations was co-ordinated at the regional level. Major issues were then presented at the provincial agricultural development committee conference to the appropriate government agencies. Areas of concern included: interest rates, cost of farm chemicals and fuels, crop insurance, transportation, assistance programs, financial counselling for farmers, Agricultural Development Corporation (ADC) current and future loans policy, marketing, public land policy and agricultural education.

Five meetings were held by agricultural development committees at the regional level to discuss agricultural concerns.

To improve understanding about the operation of ADC, selected individual committees were invited to attend board meetings and to tour the facility at Camrose.

MAP OF THE SIX ALBERTA AGRICULTURAL REGIONS



REGION 1 - SOUTHERN REGION - LETHBRIDGE

The southern region suffered a very serious drought throughout which was more devastating to dryland farmers and ranchers than in the previous year. Irrigated crops fared much better than in the previous year because producers irrigated continuously throughout the growing season.

Dryland crop yields were down very significantly on summerfallow while crops grown on stubble were almost a complete loss. The little that was produced was cut for livestock feed.

The irrigation districts produced good forage crops, particularly alfalfa, which found a ready market in the livestock sector. Other irrigated crops, particularly soft white wheat, pulses and sunflowers yielded considerably better than in 1984. Grain corn suffered from a decline in heat units and yield was reduced below 1984 levels. Heavy rains in September caused severe grade loss to soft white wheat (only about 25 per cent was milling quality) and to grain corn. The early frost damaged some fields of potatoes which were not harvested. Pulse crops and sunflowers yielded well and were less affected by weather. This resulted in a reasonable return to producers. Sugar beets were not grown in 1984 and this acreage produced soft white wheat and some of the specialty crops.

These factors, compounded with the cash flow problems of the previous year, created a financial crisis on many farms because of significantly reduced farm incomes.

The drought in 1984 set the stage for a massive assault on crops by grasshoppers, and to a lesser extent, cutworms. Approximately one million acres were attacked and many farmers were forced to use pesticides one or two times. Unfortunately, due to the continued dry weather there was little benefit from this action other than to reduce the problem in future years. The grasshopper control assistance program was especially welcomed by producers.

Livestock producers faced two serious problems. Firstly, range and pasture grazing capacity was seriously reduced and forage was expensive and not in good supply. Hay prices remained in the $100 to $140 per tonne range and was imported from northern Alberta, Montana, Idaho and Washington states. The feed grain market adjustment program, which commenced in September, 1985, proved to be very valuable to livestock producers particularly those who wintered breeding herds on grain, straw and supplements. In addition, the drought assistance program assisted many cattlemen to maintain the bulk of the cow herds by assisting in the procurement of expensive forage. Many cow herds were culled down to the productive animals and a scattering of producers sold out. This resulted in a possible reduction in the breeding herd of between 5 per cent and 10 per cent.

Livestock feeders benefited greatly from the feed grain market adjustment program and the region's feedlots finished more cattle than the previous year. Feed grain from as far as Brandon, Manitoba was delivered in large quantities into the region. At year's end the United States market was attracting 4,000 to 6,000 head of finished cattle per week.

Hog producers experienced improved returns after the commencement of the feed grain market adjustment program and after the marketing situation in Alberta stabilized. This region saw minor expansion in hog production by several producers. This is expected to continue if the present conditions remain stabilized or improve.

The dairy industry is basically unchanged from a year ago, continuing to be one of the most profitable industries in the region.

Agricultural processing of special crops increased slightly, particularly pulse crops and sunflowers. Canning sweet corn was also produced. Alfalfa plants had a reasonably successful year although the Bow Island plant could have utilized more alfalfa. Acreage of alfalfa is expected to increase by several thousand acres in 1986.

Many producers in this region faced increased financial problems as a result of two severe droughts, declining commodity prices and relatively high input costs. While input costs have declined in some areas due to specific government action, other costs have remained relatively stable. Net farm income has declined and a greater portion of this is has been used for debt servicing, resulting in less expenditures for new equipment and other services. This has seriously affected the agricultural service infrastructure and has placed undue stress on farm families.

Many of these factors have resulted in increased demand by farmers for financial advice, technical and

production economic information, and an analysis of alternative courses of action that farmers might take.

Alberta Agriculture responded by administering various support programs introduced by the provincial government, and by placing a major emphasis on farm financial management programs and consulting with individual farm families. In addition, technically-oriented production programs were continued as well as numerous tours, demonstrations, and farm visits. Interviews with farmers increased substantially to approximately 50,000—a significant increase over 1984. Farm visits by district agriculturists and specialists were also maintained at a high level. While demonstration plots increased in number, the drought considerably reduced the relevance of the demonstrations.

A very successful "Gear Up Financially" program was introduced to farmers in six districts. It consisted of classroom lessons and on-farm visits by an instructor and district staff. Approximately 40 farm families participated in the program which will be expanded to 12 districts in 1986.

The consulting program involving three contract consultants and two regional economists continued to be well received by those farmers experiencing financial difficulties. In all, 73 farmers received this service.

District and regional staff, working with commodity groups and agribusiness, planned production and economic seminars as well as farm management and marketing courses throughout the region. Two very successful regional seminars, "Intensive Crop Management" and "Holistic Grazing", were held in Lethbridge. While the total educational events (160) were down due to support program pressures, attendance was good (4,889). The special crop and salinity tours were very well attended as were tours of the intensive crop management plots.

The on-farm demonstration program continued in 1985. Projects dealt with soil fertility, alfalfa production, salinity control, range management, sugar beet production, row spacing of cereals and fertilizer placement. Because the drought seriously affected all of these plots, many of them will be repeated.

Very close liaison with the Agricultural Development Corporation (ADC) continued, particularly in the areas of production. Regional specialists worked closely with loans officers on many loan applications. In addition, district staff held 3,731 client interviews dealing with farm management and credit.

The major emphasis by agricultural service boards this past year was on soil conservation due mainly to wind erosion and to the increasing salinity problem. The conservation and development branch assisted regional staff in emphasizing the importance of soil conservation. Continuous monitoring of knapweed and scentless chamomile as well as the ongoing leafy spurge control in the river valleys took place.

District staff continued to support agricultural society activities in rural areas. They also provided support and advice to co-operative seed plant boards.

The agricultural water pumping program served 195 farmers and ranchers throughout the region during the 1985-86 pumping season. A number of applicants filled two or three dugouts, with distances varying from a half mile to eight miles. The local engineering office co-operated with Alberta Environment to meet the requirements of special projects, such as the Waldron Grazing Association, to move water to a number of locations. Pumping was general throughout the region, with Pincher Creek, Warner, Cardston, and Claresholm being the busiest areas.

4-H continued to benefit both young people and leaders through their participation in clubs and activities. At year's end there were 81 4-H clubs registered in region 1 consisting of 40 beef, 17 light horse, 6 multi, 6 sewing, 3 sheep, 2 dairy, 1 swine, 3 foods, 1 sugar beet, 1 pheasant, and 1 computer. Total membership in the clubs was about 1,367. Highlights of the year were two summer camps at Elkwater, with 162 members attending, and the regional light horse show, with over 1,500 entries.

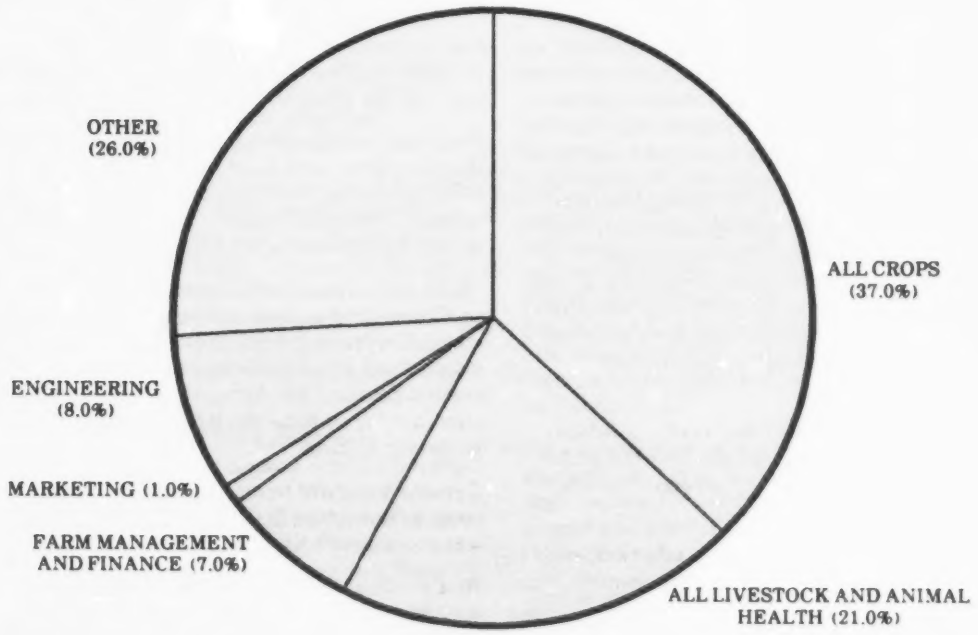
District and regional staff prepared 298 news columns and completed 186 radio broadcasts. *Agrivision* continued with the production of approximately 90 10-minute shows. In addition, staff participated in 38 other television events.

Ag-Expo'86 held in March was again successful. All exhibitor spaces were utilized and the international seed fair component had even more entries than in 1985 with over 85,000 people attending this four-day event.

The seminars, planned and resourced by department staff, were well attended.

NUMBER OF CLIENT CONTACTS	
Interviews	50,911
Telephone calls	48,817
Farm visits	3,399
Letters	1,731
Educational programs	160
Attendance at programs	4,889

Client Contacts by Subject Area



REGION 1 - SOUTHERN REGION

REGION 2 - SOUTH CENTRAL REGION - AIRDRIE

Better moisture reserves in crop and pasture land and a better spring run-off in most areas provided adequate water on-farm for livestock and domestic needs. As a result, producers in the region anticipated improved forage supplies and a better crop year than in 1984. However, as the year progressed from spring seeding through July producers' hopes turned to disappointment.

Spring frosts and dust storms forced farmers to reseed many fields twice and some three times. Lack of spring and early summer rain destroyed any possibility of good crops. In addition, an early and prolonged cutworm outbreak in the south and central areas followed by a prolonged, severe hatch of grasshoppers that required as many as six to eight sprayings to control, added a further drain on producers' short cash position.

By early summer most producers had cleared out their on-farm inventory of grain from the drought reduced production of 1984. Livestock producers paid top price to maintain supplies of both grain and forage supplies until the new crop came on the market. As drought conditions worsened, producers realized that unless local supplies of feed were arranged early, the situation would become even more serious. As a result, several hundred thousand acres of drought stressed crops were harvested as dry forage or silage. This action was encouraged by amendments to the Alberta hail and crop insurance program. With an improved forage inventory over that of 1984, late season rains providing good fall growth, and a relatively mild winter, the need for import supplies was minimal.

Late August rains and continued wet, cool conditions through September delayed harvest and lowered grain quality. This further depressed the feed grain market situation.

The fertilizer incentive program, fuel tax rebates, the grasshopper chemical rebate program and enhanced farm water assistance programs provided cash to financially stressed farmers and ranchers. These were followed by the livestock drought assistance program, the red meat stabilization program and the feed grain market adjustment program.

Record numbers of producers obtained application forms for these programs from district offices where assistance was available to help them through the claim process. The funds received allowed producers to pay their suppliers, many of whom would have faced bankruptcy without the direct assistance of producers.

With the introduction of the feed grain market adjustment program, livestock producers began to break even and in early 1986, as market prices for hogs and cattle improved, they were able to make a profit. This program has helped stabilize livestock and poultry production in the region. Depressed land prices, falling grain markets and reduced grain sales created a prairie feed grain surplus when the lower quality 1985 crop was harvested. This left Alberta's grain producers in a tight financial position with many unable to meet their commitments to creditors. Payments through the livestock drought assistance program, the Alberta hail and crop insurance program and the federal drought acreage assistance program gave most producers some cash flow relief.

Finally, payments under the western grain stabilization program enabled producers to plan for and plant their crops in the spring of 1986.

Field staff of Alberta Agriculture in the regional and district offices responded to the demands placed on them by the assistance programs and still managed to maintain a reasonable level of education activity and service to producer and industry needs.

There was a considerable increase in requests for services related to farm water supply systems, controlling surface water movement, and beef cattle housing and handling facilities. Poor harvest conditions created demands for demonstrations of grain conditioning systems using heated air dryers or natural air drying systems.

Demand for water pumping was limited to the southwest districts in the region where spring run-off was poorest with 45 dugouts being filled on request.

As a result of the severe forage shortage in 1984 and the need to supplement supplies with northern Alberta feed at inflated costs, cattlemen in the region were very receptive to adopting the practice of seeding annuals under seeded with forage crops to extend the grazing season and assure a feed supply. Demonstrations by producers continued in 1984 and 1985 with the support of the on-farm demonstration program. Through tours, news columns and extension meetings, livestock and dairy specialists and district agriculturists

were successful in encouraging cattlemen to try the practice in 1985.

With the support of the regional marketing officer, district agriculturists and specialists looked at alternative markets and systems to get the best possible return for products of Alberta farmers. A monthly newsletter called *Farming the Markets* created considerable interest and requests for followup at 33 industry and district extension meetings.

Total client contact at district offices in the region increased by 62 per cent from the previous year. Crop and soils related contact decreased as did livestock and animal health services requests. Farm visits declined and the number of education programs carried out were down slightly, but producer attendance increased by 39 per cent indicating an interest by farmers in new information of benefit to the farm operation.

Farm business and financial management, marketing and engineering client contacts all increased. Other client contacts, due to the assistance programs, increased to a third of the total for the region.

Sixty-five of the 214 education programs carried out by district agriculturists with the assistance of regional specialists dealt with the farm business management and credit/finance needs of producers. These included six 12-day "Gear Up Financially" courses, part of the farm financial initiatives program. The courses attracted 82 farmers and/or their wives with a total of 125 participants. These courses were rated highly by participants.

The consulting component of the farm financial initiatives program served an increased need by farmers in the region. Through the year, hired "farmer" consultants provided 30 farmers with individual counsel. Another 600 farmers obtained financial counsel from district agriculturists and regional farm economists in the region.

Activity through Agricultural Development Corporation (ADC) offices included 124 beginning farmers loans in the amount of $13.7 million and 11 other loans in the amount of $0.6 million for a total of $14.3 million.

Total lending activity decreased from $19.7 million because of decreasing net farm profits, drought conditions and falling land prices.

Farmer inquiries increased with additional emphasis on financial counselling. Twenty-one farmers received counselling by farmer-counsellors under the enterprise counselling program.

District agriculturists and agricultural service boards gave increased attention to a worsening potential for severe soil erosion. The region's soils emphasis committee planned a number of initiatives to encourage farmers to stay off their fields and leave their stubble standing, to practise chemical fallow for weed control and to plant erosion sensitive soil to perennial forages or fall crops. Agricultural service boards in the region co-operated in these programs and undertook emergency control where necessary.

The on-farm demonstration program increased in popularity. Project applications increased to 44; 30 were approved from new co-operators and six were approved renewals from active co-operators to continue their demonstration. The region's research review committee, consisting of five producers and five field services staff, toured the region to observe a number of projects.

District and regional staff continued to use local radio stations and newspapers to get topical, seasonal information to producers. Newsletters with production technology updates, information on government and department programs, and extension education program details were sent to all producers in each district two to four times during the year. In addition 22,000 department bulletins and publications were distributed by district staff.

Agricultural societies continued to be supported by district staff. Local fair boards and other community organizations received co-operation and assistance from district and regional staff to carry out agricultural shows, fairs and community events.

Twelve district co-operative seed cleaning plants continued to operate in the region receiving support from district agriculturists and regional specialists. Plants continued to upgrade their equipment even though cleaning volume was down for the year creating a need to adjust rates and refine management practices.

The green certificate farm training program continued to expand in the region with 41 trainees being tested at Level I or Level II achieving a 92 per cent success rate.

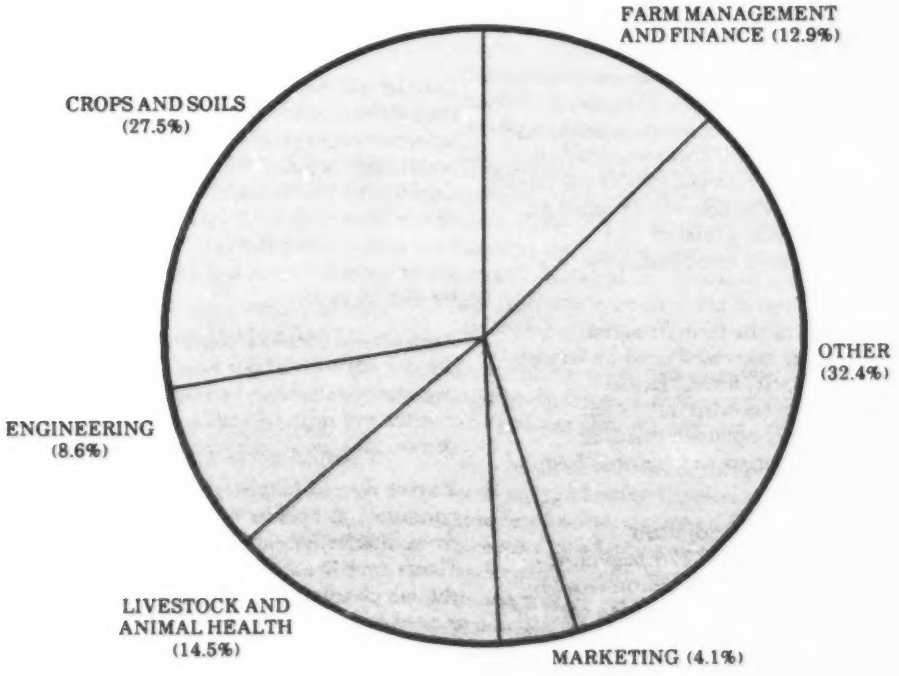
Agriculture Week was supported by district and regional staff through speaking engagements, office open house days and other events to promote agriculture. Agaware events were also supported.

There was 63 clubs with 1120 members enrolled under the 4-H program in the region. Their ongoing activities in public speaking, training and leadership development, seminars and project related competitions received field staff support. The region's 4-H "On Parade", co-sponsored by Alberta Agriculture and the Calgary Exhibition and Stampede Board, continued to grow in popularity. The mid-January, three-day leadership recognition and training event attracted over 200 leaders from central Alberta.

Applications taken under government financial initiative and assistance programs totalled 17,039.

NUMBER OF CLIENT CONTACTS	
Office interviews	34,577
Telephone calls	35,557
Farm visits	1,571
Educational courses	214
Attended by	7,098

Client Contacts by Subject Area



REGION 2 - SOUTH CENTRAL REGION

REGION 3 -
NORTH CENTRAL REGION - RED DEER

Annual precipitation was erratic. Total moisture, owing to fall rains, was near normal but most of the region had only two to four inches during the active growing season. Serious drought was experienced in major parts of the counties of Red Deer, Lacombe, Stettler, Paintearth, Camrose, M.D. of Clearwater and Special Area #4. Drought was spotty in other areas. Because of poor hay yields, many cereal crops were silaged. As a result, feed supplies were generally adequate. Less crop was available for sale and cash flows were reduced.

Most severe crop losses were east of highway #21. Pastures were severely overgrazed leading to potential problems in 1986. Cereal and canola yields ranged widely with the better crops still being below average. Hay was short and of poor quality. There were significant problems with stand viability of winter wheat resulting in producers planning to take a more conservative approach in the future.

Weed control was normal although infestation levels of perennial weeds such as quack grass and scentless chamomile increased. Aerial applicators were able to meet demand. Several agricultural service boards co-operated on a major scentless chamomile program which included posters, media, hay inspection and spraying programs.

Insects were not a major hazard to crop production in 1985-86 although grasshopper spraying did take place in the eastern portion of the region.

There was a major diamondback moth infestation in the counties of Flagstaff and Paintearth. Isolated reports of cutworm damage were received.

The lower than normal crop yields created financial hardships for many farmers and agribusiness. This was compounded by the cash flow problems of the previous year.

Virtually all barley was sold and bins were empty. However, much was sold to feeders as "tough" due to wet harvest conditions. This grain was discounted 25 to 50 cents per bushel. Input costs, if anything, had marginally increased from the year before.

The fall rains eased the moisture shortage but caused harvest problems, reduced fall tillage and limited fertilizer and soil incorporated herbicide application.

Calf prices were good. Feed shortages and cash flow problems precipitated some sell down of the cow herds in late summer and early fall. High feeder prices tightened feedlot margins to the point that a few ceased to operate.

Hog producers had low prices early in the year but they recovered to slightly profitable levels by year end. Due to high debt loads and narrow margins a few hog producers went bankrupt. These were generally associated with high land debt, not investment in the hog operation itself.

The dairy industry was stable.

1985-86 saw increasing financial difficulties on many central Alberta farms. Many of these leveraged their position in the late '70s (specifically 1979 and 1980). Lenders reported that one to two per cent went bankrupt or sold out and that a further 10 per cent of accounts would be in arrears. There was a further erosion of equity due to falling land prices. Land near Coronation was selling at $200 to $300 per acre down about 50 per cent from 1979-80. Similarly, land around Red Deer was selling at $700 per acre, again down about 50 per cent from 1979-80. Lenders reported considerable financial worry and stress in their farm clientele in that they were unable to make payments for the first time in their careers and that some had loans exceeding savings for the first time in their lives.

Agricultural service industries and equipment dealers continued to experience declining sales and increased accounts receivable. Some switched to cash only as a way of doing business. Two major fertilizer dealers cut back on services and sold their custom application equipment. Feed mills remained stable and in fact, one mill in Red Deer underwent major expansion of facilities.

Agricultural processing industries continued to operate normally. Fletchers Fine Foods saw business increase. Central Alberta Dairy Pool reported a very profitable year. Lambco continued to gradually expand. The number of clients contacting the Agricultural Development Corporation (ADC) continued similar to 1984-85. The number of people getting loans was slightly less but the number seeking financial counselling increased significantly. This was also the

case with requests directed towards district agriculturists. Approximately 3,300 individual financial counselling sessions (of varying degrees of complexity) were carried out by district agriculturists and the consultants employed under the financial initiatives program. Staff sponsored and instructed 169 short courses with an attendance of 4,750. In addition, five in-depth financial management courses were conducted for 90 farm families. District agriculturist efforts in financial/farm management increased threefold from the previous year. District staff increased liaison with local banks.

1985-86 saw heavy demand on district offices for administration of various support programs. Excluding this program administration, district staff conducted 23,000 office interviews and responded to 20,000 phone calls. These contacts sought a wide range of production, management, marketing and finance information. Staff conducted 2,783 farm visits.

In total, 389 educational events were conducted. Disregarding large shows such as AgriTrade and Grow Show (25,000 attendance), attendance was 11,983. A wide range of production, finance, marketing and general farm management information was covered. A much higher demand, relative to previous years, was seen in the areas of finance and management. Regional seminars included the "Gear Up Financially" courses, grain marketing, intensive crop management and pasture management. Several of the seminars were conducted jointly with forage associations, the Alberta Canola Growers, the Western Barley Growers, the Alberta Cattle Commission and numerous community groups. Four lenders seminars were held for central Alberta bankers in the areas of crops, cow-calf, swine and dairy.

Publications that were developed included newsletters, joint publications with agricultural service boards and forage associations, and several production cost budgets that were used in financial consulting with farm families and banks.

Several district and regional staff members continued to be heavily involved in field applied research projects. Work with agricultural service boards and forage associations continued to expand in 1985-86. More than 80 applied research projects were conducted with help from the above mentioned agencies and the on-farm demonstration program.

The upgrading of intensive livestock facilities continued. New construction was minimal but numerous requests were directed to regional engineer staff on upgrading existing buildings, troubleshooting livestock environments, water supply systems and grain drying systems.

Although interest has decreased, district agriculturists continued to provide input into subdivision requests and siting of intensive livestock facilities. District staff members attended 389 meetings as a result of their involvement with agricultural societies, seed cleaning plants, rural crime watch, agricultural development committees, forage associations, 4-H clubs, and agricultural service boards. Ten service boards were active in the region. The green certificate program involved 40 farm trainers and 50 trainees. Staff provided numerous consultations on farm labor in addition to the green certificate program.

1985-86 saw approximately 150 4-H clubs active in region 3 with a total membership of 2,500.

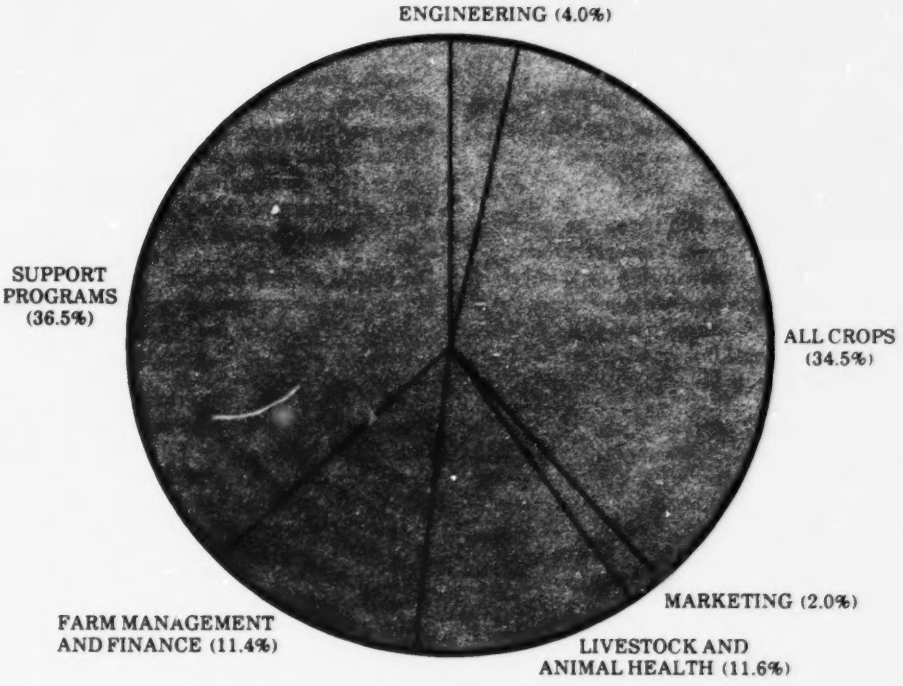
Multi-project, beef and horse clubs continued to be the most popular.

During Agriculture Week several districts participated in numerous school, shopping mall and evening promotional dinner activities.

NUMBER OF CLIENT CONTACTS

Office interviews	46,500
Telephone calls	36,500
Farm visits	2,783
Educational events	389
Attended by	11,983

Client Contacts by Subject Area



REGION 3 - NORTH CENTRAL REGION

REGION 4 - NORTHEAST REGION - VERMILION

Region 4 was unable to avoid the hardships facing Alberta's rural economy this year. The financial squeeze caused farmers in all districts to rely heavily on extension staff for information and assistance. District offices conducted 69,879 interviews this year and answered 50,772 phone calls, significantly more than last year. Agricultural specialists in the Vermilion regional office noted similar increases in demand for expert opinion and advice.

Cool spring temperatures, a summer drought and wet harvest weather reduced yields and increased costs. In the northern half of the region up to 30 per cent of the crop was left in the field over winter.

Farmers were looking for alternatives in 1985. Different crops, different cropping methods and alternative soil, water and fertilizer management schemes were important.

A large number of cereal, oilseed and forage varieties are recommended for use in Alberta. However, the response of these varieties to local conditions is largely unknown. In co-operation with Canada Agriculture, regional specialists established variety trials at seven locations in region 4. This local information on yield and adaptation was well received by producers and extension staff.

Late season interest in alternate crops, such as lentils, was evident because seed prices were good. Forage seed prices were also higher due partly to speculation on the effect of the U.S. farm bill and partly to low seed yields because of drought. Poor price expectations for cereals led some producers to consider seeding forages on their lower quality land or taking forage seed instead of hay for 1986.

After a difficult winter, many producers decided to turn their livestock on pasture early in 1985. Slow early growth and drought substantially reduced pasture production. As a result, most pastures were seriously overgrazed by late August. The best strategies used by producers to overcome these problems was some combination of annual forages (for either spring or fall grazing) and rotational grazing. Both of these strategies are being actively promoted and extended in Region 4. For example, the on-farm demonstration program funded 11 forage related projects in 1985.

Hay production was also reduced. Only four districts reported normal hay yields, the rest ranged from 20 per cent to 80 per cent of normal. Many producers expected winter feed shortages. To facilitate marketing, the regional office operated a hay listing service from August 1 to March 31. Over 600 listings of hay and straw for sale were handled during this period.

Soil and water management increased in importance, especially in areas with problem soils. For example, the variation in crop growth along pipelines created an interest in deep-ripping. Extension staff developed several demonstration projects to evaluate it. Fertilizer is another area where farmers tried to tailor their needs more closely to soil tests and moisture levels.

Weeds, insects and diseases continued to be costly problems. Scentless chamomile spread noticeably along roadways in the region. Grasshoppers were less a problem than anticipated. A limited acreage was sprayed for diamondback moth in canola. Blackleg, a virulent disease of canola, increased near the Saskatchewan border.

In spite of reports of farmers dispersing their beef herds, numbers remained steady. Hog numbers were down nearly 20 per cent at one point then began to increase.

From the work done on the feed grain market adjustment program, farmers and extension staff became aware of problems related to nutrition and to inefficient use of livestock feeds. Generally there is a poor understanding of data on livestock feeding. A ration-formulation program is currently being developed by regional specialists.

The green certificate program maintained a high level of activity in the region, training 41 candidates. Farm training specialists assisted farmers in a wide variety of labor management areas.

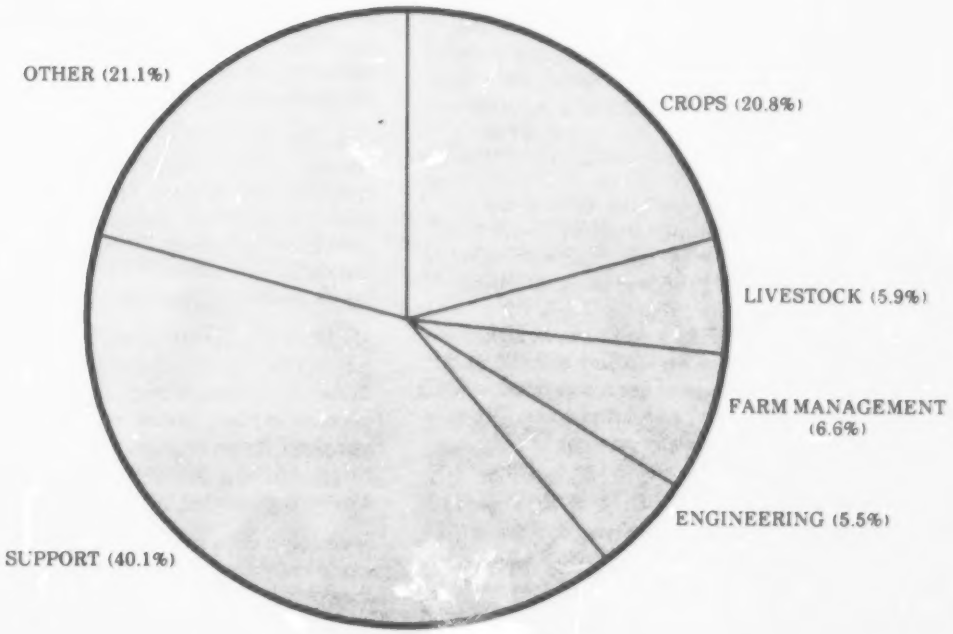
Farm finance and assistance programs were very important to producers. District staff planned and delivered 48 courses to 1,246 participants on farm management, credit, finance and marketing. Over 35,500 interviews and phone calls were handled by extension personnel on assistance programs.

The provincial farm management initiatives program was successful. About 150 farm families took advantage of "Gear Up Financially" courses and individual farm consulting. Agriculturists had good personal contact within districts. Overall, they made 2,566 farm visits

and participated in 497 community meetings. They also wrote 536 news columns, 1,665 newsletters and spoke on 230 radio programs.

NUMBER OF CLIENT CONTACTS	
Office interviews	69,879
Telephone calls	50,772
Farm visits	2,566
Educational events	231
Attended by	7,565

Client Contacts by Subject Area



REGION 4 - NORTHEAST REGION

REGION 5 - NORTHWEST REGION - BARRHEAD

The spring of 1985 was more hectic than normal. Several farmers still had some 1984 harvest to finish, and most had not been able to complete all of their fall work and fertilizer/herbicide applications. This resulted in a compressed period of time to get the 1985 crop seeded. It also placed added demands on fertilizer supplies and equipment. Shortages of anhydrous ammonia and ammonium nitrate caused some seeding delays.

Extreme moisture variations occurred throughout the region and even within districts during 1985. Some areas approached normal rainfall of up to 12 inches, while other areas received less than three inches for the entire growing season. The areas hardest hit by drought were the northern and northeastern portions of the region, and the southwestern portions. Pockets of drought did, however, occur in almost every district. Paradoxically, even the worst districts had pockets where rainfall was adequate.

The extreme variations in precipitation resulted in the most variable annual crop yields in recent years. The central portions of the region had bumper crops, whereas in the other areas crops ranged from average at best, to extremely poor. Forage yields throughout most of the region were below average, and in areas severely affected by drought, were only about one-third of normal.

The harvest period was hampered throughout the region by wet weather. Continual showers resulted in combining being stretched from late August to early November. A great deal of grain was taken off tough and damp, and as the season progressed quality continued to deteriorate. Grades were lost in all crops and germination percentages were below normal. A far larger than normal percentage of grain was dried, adding 25 to 30 cents per bushel to production costs. When winter finally arrived, about eight per cent of the region's annual crop acreage remained to be harvested. The main areas affected were the Athabasca and Thorhild districts.

Quotas for the 1985 crop, especially barley, were very limited. Only dry grain was wanted in the elevator system, so a larger than normal amount of barley was fed to livestock. This, coupled with a lot of poorer crops being put up for feed, caused the hay supplies to be stretched to a point where a surplus occurred. In total, 478 producers listed over 45,000 tonnes of forage for sale. Sales both within and outside the region were very poor.

Calf prices in the fall of 1985 were similar to prices of the previous two years, being in the 85 to 90 cent range for the majority of the calves. Despite the continuing decline in livestock numbers, prices for A1 and A2 slaughter cattle similarly showed no strengthening. This was also the case for slaughter hogs throughout the year.

Continued low selling prices for livestock producers was offset somewhat by cheaper feed. The abundant supply of tough and heating barley resulted in a softening of prices, some as low as $1.25 to $1.40 per bushel. This, coupled with the $21 per tonne feed grain market adjustment program, lowered the cost of gain and resulted in modest profits.

The slight gains of livestock producers were more than offset by the losses of grain farmers. The cash flow problems encountered over the past few years continued in 1985 and increased in magnitude. Servicing of debt became more difficult and generally speaking, farms with less than 50 per cent equity were in a very tight spot.

The spin-off effect of lower net farm incomes was felt in the agricultural service industries and in agricultural communities. Machine agencies experienced declining sales and even well managed ones had debt servicing problems themselves. Several went out of business. Similarly, agricultural suppliers were forced to tighten up on credit, making operating money harder to obtain.

Short term government support programs such as the Alberta feed grain market adjustment program, Alberta livestock assistance program, farm fertilizer price protection plan, interim red meat insurance program, and the Alberta crop insurance restoration program helped alleviate the situation by injecting sizeable amounts of money into agricultural communities.

Numerous consultations with individual farmers were made regarding financial management, credit and marketing. In total, 11,226 contacts were made by district staff in these areas. Production economics continued to be stressed in all extension activities, and regional cost of production data was collected for the third and fourth years, respectively, for cow-calf

operations and cropping enterprises. These studies continued to help producers and staff make management decisions.

The financial management initiatives program continued in its second year. The financial counselling component of the program resulted in a further eight major consultations being done by hired consultants (all active producers) with their peers. These consultants augmented the efforts of district and regional staff in conducting detailed evaluations. A second component of the program, the "Gear Up Financially" courses, were successfully initiated in 1985-86. Six courses were offered throughout the region to a total of 85 farm families. These 12-day management courses included classroom study and on-farm visits. Feedback was very positive.

During 1985-86 district staff conducted 43,748 office interviews and responded to 32,675 telephone calls. These contacts were nearly double the figures for 1984-85. Contacts covered a wide range of production, management and marketing enquiries, and a significant number were related to support program administration.

District staff completed 3,165 farm calls and attended 673 meetings involving agricultural fairs, seed cleaning plants, rural crime watch groups, agricultural development committees, further education councils, 4-H clubs and agricultural service boards. A total of 453 news columns were written, 131 radio reports delivered and 29,840 publications distributed.

In total, 345 district educational courses, demonstrations and tours were conducted. They were attended by 11,193 producers. A full spectrum of production areas, financial management, marketing and skill training was covered.

Regional programs included two major seminars jointly sponsored with the Alberta Canola Growers and the Western Barley Growers. The seminars, entitled "The Leading Edge of Production Technology", were attended by 250 of the region's top producers. Other regional programs included "Swine Breeding and Genetics", jointly sponsored with the Alberta Swine Breeders' Association, and a dairy lenders seminar, designed to update lenders on key production and management issues relating to dairy enterprise loans. Smaller regional functions were co-sponsored with the Pembina Forage Association, the West Central Forage Association, the Alberta Cattle Commission and the Alberta Pulse Growers. An eight-issue regional newsletter entitled *Beef 'n' Bacon* was sent monthly to 2,500 livestock producers. It was designed to provide up-to-date information on nutritional and management matters.

Continued regional emphasis on establishing producer groups to assist in technology transfer resulted in the formation of the Northwest Regional Peat Soils Management Assocation. Smaller district groups were also established: the Pro-Grow Canola Club at Fort Saskatchewan and the Pembina Crop Club at Westlock.

Several district and regional staff members continued to be heavily involved in demonstrations and field applied research projects. Work with agricultural service boards and forage associations in this regard was expanded in 1985. The on-farm demonstration program continued to be extremely popular and 30 projects were submitted for review. The majority of them involved pasture and forage management.

In the engineering field, most requests were for information on adding to existing facilities and improving already established operations. There was a substantial increase in "do-it-yourself" projects. The wet harvest caused a significant increase in requests for information on grain drying, grain storage and aeration.

Provincial government water supply programs resulted in a doubling of the number of dugouts that were constructed. In 1985, 145 were built compared to 71 in 1984. Similarly, well constructions increased from 350 (1984) to 570 (1985). The capacity of most new water supply systems increased by 30 per cent from previous years.

The total number of Agricultural Development Corporation (ADC) loan submissions in 1985-86 was 219. This was up slightly from the previous year (197). Of these total submissions, 163 were direct loans and 56 were specific guarantees. The average loan submission remained unchanged at $119,000. Counselling and developing workout plans continued to be a major activity for ADC staff.

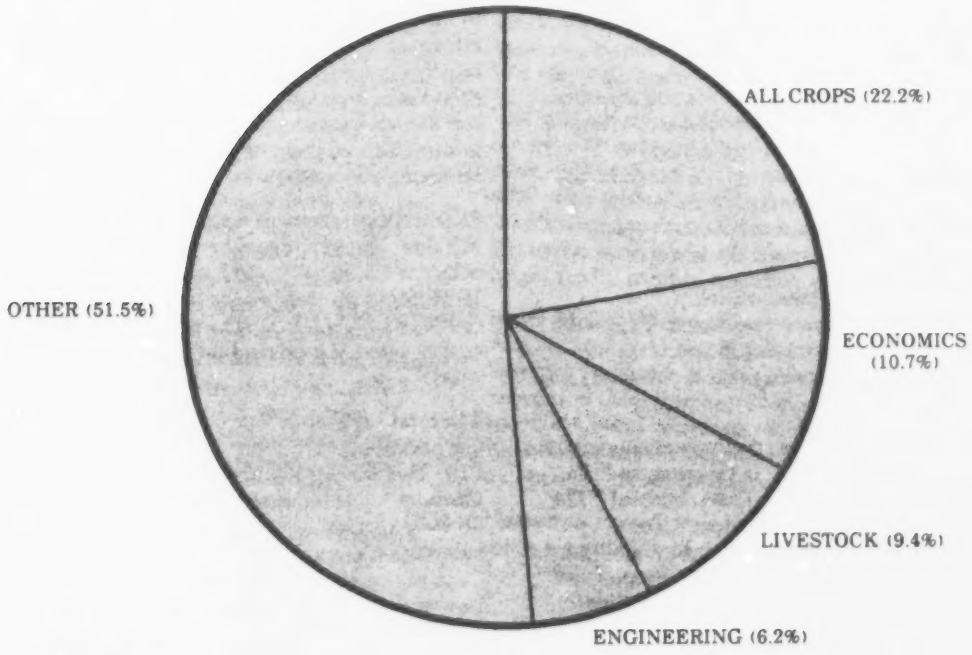
1985-86 was the first year in six that the green certificate program in the northwest region operated below full quota. The year started with virtually no surplus trainee or trainer applications, and those

shortages continued throughout the year. Total certificates issued, however, increased by one. In 1985-86, 25 Level I certificates and four Level II certificates were awarded. At the close of the fiscal year there were 35 trainees on farms.

The number of 4-H clubs in the region decreased slightly to 101. Total membership was 1,511 guided by approximately 500 leaders. The most popular project continued to be beef with 44 clubs carrying the project. This was followed by foods, light horse and clothing, with just over 20 clubs carrying each of these projects. The trend continued towards multi-project clubs. Although numbers were down slightly, 4-H continued to be very popular in rural communities.

CLIENT CONTACTS	
Interviews	43,748
Telephone calls	32,675
Farm calls	3,165
Courses	345
Attendance	11,193
Total contacts	91,126

Client Contacts by Subject Area



REGION 5 - NORTHWEST REGION

REGION 6 - PEACE RIVER REGION - FAIRVIEW

Spring 1985 saw approximately 30 per cent of the 1984 crop still to be harvested before spring work and seeding could begin. An early dry spring allowed the crop to be taken off in surprisingly good condition. Wheat harvested in the spring graded No. 3 CWRS and Canada No. 1 feed. Canola survived the winter very well with most of the spring harvest grading No. 1 and No. 2. Spring harvested barley graded a number 1 or 2 feed.

The late harvest caused producers to shift from planting wheat to planting more barley and canola.

Because of the short time frame between harvesting the 1984 crop and seeding the 1985 crop, there were numerous problems with the availability of fertilizers, particularly anhydrous ammonia.

May and June stayed dry and farmers had to seed into dry soil and hope for rain. No rain was received. The result was spotty germination and patchy looking fields. The drought continued into the summer with Manning, Hawk Hills, Deadwood and Valleyview areas being particularly hard hit. To the end of July, Debolt received only 35 per cent of normal precipitation while Grande Prairie received 56 per cent of normal precipitation. Rain over the region was spotty. The areas that received timely showers produced good crops. The Sexsmith, La Glace and Nampa areas had slightly above average yields.

Frost, which was recorded every month of the summer, was also a problem for producers. Major frosts occurred on June 10 and August 7 and 8.

The drought forced the crops to mature very quickly. Some swathing was done in late July with combining beginning in early August.

The rain farmers had been looking for started the first week in August. Rain and cool weather combined to slow the harvest. Early swathed grain lay in flooded fields sprouting and deteriorating in quality. The soils were waterlogged making it impossible for farmers to take combines or other heavy equipment on to the fields. From August 7 to October 21, 10 to 14 inches of rain was recorded.

Many farmers waited in vain for the ground to freeze in order to use the heavy harvesting equipment. Unfortunately snow arrived extremely early, beginning with a storm October 4. For the second consecutive year Peace region farmers headed into winter with 35 per cent of their crop still in the fields. The exception was the Fort Vermilion-High Level area where 90 to 95 per cent of the harvest was completed. Approximately 10 per cent of this crop was uncut. Farmers who had access to combine headers found they were able to salvage most of their crop in November and December. By spring the remaining crop had been flattened by snow and wind and was impossible to salvage. A mild open winter created significant deterioration in the grade and quality of grains and oilseeds remaining in the swath.

Forage production started out on an optimistic note with a good moisture supply and low inventories. There was a problem with winterkill especially in the Falher area where over 10,000 acres had to be plowed under. The region's alfalfa pelleting plants also started the year on an optimistic note when the plants at Grimshaw and Wanham reopened. Production was down by 25 to 50 per cent of normal with yields of one-half to three-quarters ton per acre being common. However, the plants closed in July and August after having processed less than half their normal volume.

Forage seed production was hard hit by the drought. Average yields for creeping red fescue seed were in the 150 to 200 pounds per acre range or 50 per cent of normal. Price increases allowed producers to take some profit.

Cereal and oilseed prices trended down over the year. Marketing opportunities were good for farmers in the region. The drought in the southern prairies reduced the amount of grain available and thus the rail car allocation to the region was excellent. Quotas generally were generous allowing farmers to ship all the grains and oilseeds they wished. Producers also received substantial cash payments from the Western Grain Stabilization Fund.

The region had been experiencing a gradual increase in livestock numbers. The high demand for feed in the spring of 1985 caused some producers to turn their cattle on to pasture early. The dry spring and early summer conditions caused a rapid deterioration of pastures. Some cattle had to be removed and marketed early because of lack of pasture. Some farmers culled heavily or reduced some of their herds. The fall of 1985 saw producers with a much tighter feed situation since little straw had been baled. Less than 10,000 tonnes of

feed was for sale. Producers supplemented their livestock with grain and the cattle came through in good condition, thanks in part, to a mild winter.

Livestock producers took a much more direct and active interest in the marketing of their stock. The Peace Country Cattle Sales Association based in High Prairie, sold 1,000 head directly from the High Prairie Grazing Reserve. Producers at the Bear Canyon Provincial Grazing Reserve acted as their own auctioneers and sold their calves directly from the pasture.

Producers throughout the region continued to face cash flow problems. Two years of poor crops and lower livestock prices combined with increasing input costs, created problems for producers in servicing their debt. To survive, many producers and their families sought off-farm employment in the oilfields, the forest industry or in town.

Many producers with problems also responded to the consulting service that was available under the financial management assistance program. The six counsellors (all producers) met with and helped 49 farm families deal with financial management and production problems. Six of these were follow up from counselling conducted last year.

District agriculturists and district home economists held five "Gear Up Financially" courses and held a sixth in co-operation with Fairview College. These courses helped farm families update their skills in accounting and preparing and analysing various financial statements. One of the most appreciated portions of this course was when instructors visited farm families to provide individual in-depth consulting on their specific problems.

A number of new provincial and federal emergency assistance and incentive programs were developed and implemented. District staff were directly involved in the administration of these programs, creating a sharp increase in the traffic flow through the offices.

These programs included: Alberta feed grain market adjustment program, Alberta farm fertilizer price protection program, livestock drought assistance program, Alberta red meat interim insurance payment, national tripartite red meat stabilization program and the federal drought program.

Also handled were a number of programs aimed at ensuring that there was an adequate supply of water in the drought areas. These included: dugout pumping program, dugout construction and renovation program and the Alberta farm water grant program.

These programs created an additional 10,482 office interviews and an additional 6,251 phone calls for district staff. Additional clerical help was recruited at most offices to help the regular staff with the flood of paperwork created by these.

In addition to these programs, district staff held 26,112 office interviews and responded to 30,377 telephone calls from producers. This was an increase of 37 per cent and 14 per cent respectively from 1984-85. District staff also made 3,152 farm visits, an increase of 18 per cent over the previous year. These were made in response to a wide range of production, management and marketing enquiries.

Staff also attended 421 meetings as a result of their involvement on various agricultural service boards, agricultural development committees, seed plants and other producer groups.

Other extension activities were not neglected as staff held 308 courses, seminars and tours attended by 7,755 people. Major regional programs included the "Second Annual Peace Country Cattle Symposium", a canola production seminar and field day jointly sponsored by the Alberta Canola Growers and Alberta Agriculture. The agro-electronics show was held in conjunction with the Smoky River Agricultural Trade Fair.

Soil erosion and on-farm water management received high priority. A great deal of work was done with agricultural service boards to make them aware of the problems that exist and to encourage them to take action to correct them. A special effort was made to co-ordinate the activities of local agricultural service boards, Alberta Agriculture, Alberta Environment, Alberta Energy and Natural Resources, and the Prairie Farm Rehabilitation Administration (PFRA).

Activity with the soil conservation area program (SCAP) and the farmland development and reclamation program (FDRP) was very high. Local agricultural service boards submitted over 150 projects under SCAP and over 200 projects under FDRP. This comprised over half the total applications received provincially under these programs. The poor fall weather caused many projects to remain uncompleted.

Twenty-nine on-farm demonstration projects, heavily

involving district and regional staff, were started on farms in the Peace region. The results of last year's projects were varied with the weather causing problems in many cases. A major new project comparing conventional tillage, minimum tillage and zero tillage was initiated.

The Valleyview district piloted the first "total beef program" for the province. Thirty-eight cattlemen attended monthly and bi-monthly meetings over the winter. These sessions covered livestock nutrition, calf health, cattle handling systems and financial record keeping. As a result, producers began to use high copper, zinc and selenium trace mineralized salt, half of the members began using calf shelters at calving, and all members gained a better understanding of ration and feed requirements.

After meeting with Fairview College, cattlemen in the region began plans for the construction of a 200 bull test station for 1987.

In 1985-86 district home economists emphasized financial management. There were six home economists involved in "Gear Up Financially" courses which were well attended by participants. The need for budgeting, record keeping and management information was large and district home economists responded with courses, farm calls and media information. The farm family expenditures study (FAMEX), which started in January, quickly became a teaching tool as participants became aware of the support available to them through the home economists. Individual districts offered courses on estate planning, the financial security of farm women and how to deal with bankers.

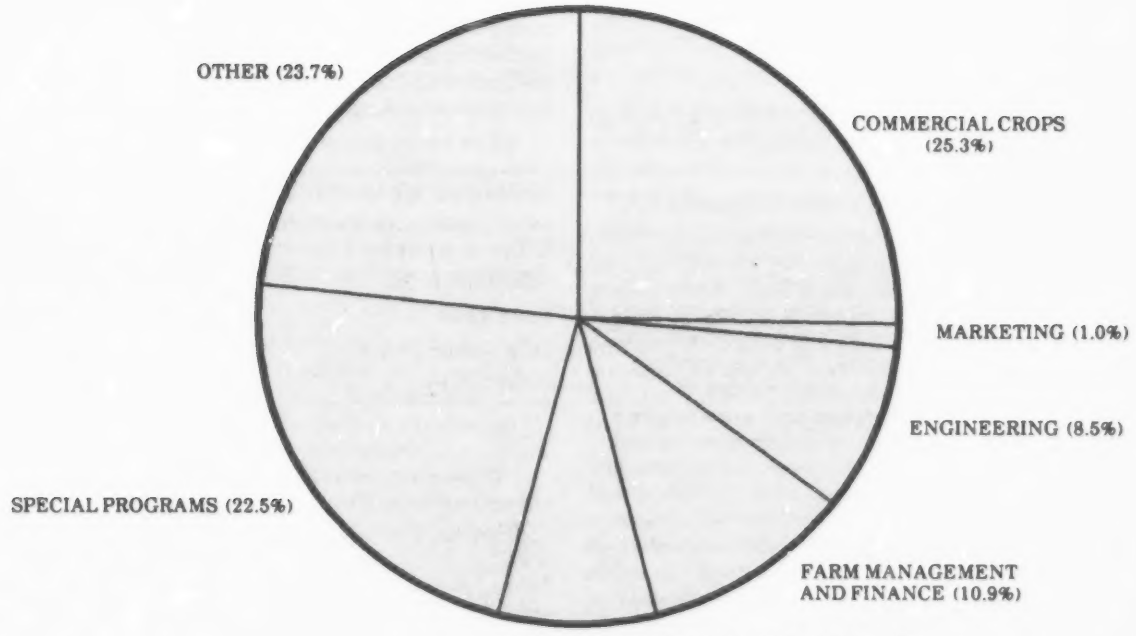
A very busy and successful rural agriculture products promotion (RAPP) program was carried out in Grande Prairie. Grocery store managers were the focus of the Better Buy Alberta program. In-store and trade show demonstrations complemented a media blitz of the city and county. Alberta food processors provided campaign support to the district home economists.

The Farm Wives' Conference, held in Peace River in November, attracted the maximum enrolment of 140 women from throughout the region. Evaluations and enrolment indicated the success of the agriculture and homemaking sessions, as well as the need for a conference such as this, where farm women can share information with one another and department staff.

NUMBER OF CLIENT CONTACTS

Office interviews	36,594
Telephone calls	35,138
Farm visits	3,152
Educational events	308
Attended by	7,755

Client Contacts by Subject Area



REGION 6 - PEACE RIVER REGION

1985
1986

MARKETING

MARKETING

The marketing sector of Alberta Agriculture provided a service to Alberta producers, processors, marketers and consultants, and facilitated a co-ordinated government response to their requirements. The sector assisted through the provision of market development and support services to Alberta's agriculture, food, feed and beverage products industry to optimize returns from market opportunities and encouraged the development of value-added activity. The broad objectives of the marketing sector were fulfilled by:

- evaluating market opportunities domestically and internationally
- co-ordinating and supplying services to assist in achieving a response to these opportunities
- liaising with and utilizing established private and public sector resources
- developing market and sector strategies and assisting in the development of individual enterprise strategies
- providing a mechanism for private sector input into the department's policy and planning process.

The marketing sector as a government service organization provided a wide variety of services and support programs to the private sector. Close contact with the private sector continued to encourage the exchange of information which permitted the marketing sector to respond with support in the form of diverse technical, financial and marketing information and assistance.

MARKETING SERVICES DIVISION

Agri-Food Development Branch

During 1985-86 the agri-food development branch provided Alberta-based companies, processors, producer and industry organizations with market information addressing new market opportunities and development initiatives in meats, cereal grains, animal genetics, dairy products and feedstuffs. The branch also addressed a number of industry issues in both crop and livestock areas. Branch support for producer and industry based organizations continued to be a major activity. Greater efforts were directed to market planning and development strategies to increase market sensitivity and enhance opportunities for planned future growth. A number of key industry sectors were assisted with critical problems caused by difficult market conditions. Agri-business and agricultural processors benefited from: programs designed to identify and develop strategies to improve market access , marketing information and education, and the development of company information/promotion materials.

The branch's activities centered on the delivery of programs and service to three major agricultural areas: crops and feedstuffs, meat and dairy, and livestock — purebred and commercial. The branch continued to act as the liaison between the marketplace and Alberta producers, processors , and industry associations. Assistance was also provided in such areas as: developing market strategies, addressing market access limitations, developing marketing tools, and organizational development.

The branch continued to support expanded value-added marketing as both meat and dairy companies increased their export activities. The branch addressed the European Economic Community Meat Inspection report and numerous other trade related issues and their impact on Alberta's red meat industry. Staff assessed our industry's ability to pursue selective beef and dairy product markets in Pacific Asia and new United States pork markets. A new Alberta beef brochure was completed and an audio-visual package on Alberta's beef industry was planned. Numerous incoming missions, featuring almost all potential export interests, were assisted.

The branch undertook initiatives to support identified market opportunities involving triticale, canola meal, processed forages and landscape products. A review of the trends and direction of Alberta's wheat industry was conducted. Methods of cereal grain upgrading were reviewed and further steps were taken to determine what economical products might be derived from these agricultural feedstocks. The marketing of soft white wheat presented problems as a result of a difficult harvest. The further diversification of processed forage products included new forms of compressed hay products, corn stover cubes and a low cost range cube. All of these products were intended for expanded export markets. A three prairie province ministerial forum was held to review difficulties faced by the canola processing industry. A task force then offered

alternative ways to address domestic and international marketing and policy issues in the future. The Alberta sugar beet industry's attempt to revive production and processing of sugar beets was supported. The branch's planning and support for a Western Canadian Grain Summit resulted in a successful exchange of ideas for the future. The Alberta Forage Seed Council liaison and co-ordination role became the branch's responsibility.

Alberta's livestock genetics industry continues to grow as a key supplier of superior quality genetic material to the world marketplace. World livestock congresses were held in Alberta and the branch hosted numerous incoming missions and visitors interested in Alberta's genetics technology. Work continued to support the growth of frozen embryo and embryo transfer technologies. In conjunction with the department's production sector the branch looked at methods to expand Alberta's horse genetics base. The branch worked closely with Alberta livestock groups in market planning. The formation of a representative organization for Alberta game farming interests was discussed.

The branch participated in interdepartmental discussions in an effort to develop Alberta's fresh water aquaculture industry. The farmers' market program was streamlined and formation of an association was encouraged to handle this successful direct marketing program.

In 1985-86 year almost $1.5 million of financial assistance was provided to support industry's development and marketing initiatives.

ASSISTANCE UNDER THE AGRICULTURAL GRANTS ACT PROVIDED TO INDUSTRY IN FISCAL 1985-86

Sector	No. of Grants	Total
Meat and Dairy Producers and Processors	17	$387,923
Crops and Feedstuffs Producers and Processors	34	380,866
Cattle Breed Associations	21	334,105
Horse Breed Associations	9	87,105
Livestock Shows and Congresses	6	71,578
Semen and Embryo Companies	8	50,988
Other Associations	9	84,952
Farmers' Markets	49	83,369
TOTAL	153	$1,480,886

Food Processing Development Centre

In 1985-86 the Food Processing Development Centre (FPDC) continued to help Alberta's food processing industry meet the needs of the marketplace through the application of new technology and development of new products and processes. All projects undertaken at the centre were at the request of Alberta food processing companies. Within the past year, over 120 Alberta companies undertook project work at the centre. In Alberta, 60 per cent of farm output is processed by local food processing industries which accounts for a net $700-$800 million annually in value added.

The product development laboratories of the centre contained equipment and facilities for product feasibility, prototype formulation development, ingredient performance assessment, physical property evaluation, packaging systems evaluation, shelf-life and product stability testing.

Product development activities included:

- Development of a vegetable protein-based frozen dessert, specifically for the calorie conscious and lactose intolerant consumers. This project entailed prototype design, formulation and flavor development. Extensive sensory evaluation studies were conducted at the laboratory and consumer levels.
- A salad dressing base formulation compatable with a variety of seasoning ingredients was developed and evaluated.
- Efficacy of modified atmosphere packaging technology to increase shelf-life of processed products, such as fresh vegetables, fish, potato products, sandwiches, pasta and prepared salads was determined.

Other product formulations handled at the centre were bottled flavored water, fruit beverages, popcorn, honey, muffin and cookie formulations, ice cream, snack foods, energy drink, ethnic foods, beef jerky and processed meat products.

The sensory evaluation laboratory offered descriptive, difference, and preference/acceptance testing throughout the year to industrial clients.

Over 400 hours were devoted to flavor, odor, color and texture analysis.

The process development section provided a serviced pilot processing facility equipped with most unit operations commonly found in the food industry, as well as specialized equipment to enable private sector industrial clients to develop and evaluate new products and processes.

Pilot plant activities closely related to product development in the transition from laboratory bench-scale developments to pilot scale operations prior to industrial application and/or commercialization.

Examples of pilot plant operations and activities included:

- Processing of a prototype meat product in quantities for consumer test market evaluation. The product is under consideration by a national packer.
- Product and process modification to establish processing conditions of a sausage product for an export market.
- A limited quantity of an innovatively packaged honey product was processed for preliminary consumer testing.
- Laboratory salad dressing formulations were produced in the pilot plant prior to commercial production.
- An investigative study to inactivate enzymes and reduce microbial contamination in oilseeds was initiated and is under review.
- Ultrafiltration of cheese whey to obtain proteinaceous fraction for product development.
- Smokehouse operations facilitated production of test market quantities of re-formed jerky for a local processor.

Many of the projects undertaken at the centre involved personnel of the client company. In some instances projects were planned and executed at the bench level at the centre by industrial personnel with the centre providing the space and equipment needed for the project.

The FPDC offered technical advisory and information services to address the problems encountered by both the small and medium-sized food industry, notably their limited access to either information and/or qualified and specialized expertise.

FPDC staff responded to approximately 1,000 requests for technical/scientific information. Examples of specific information requests included: non-nutritive sweeteners, modified atmosphere packaging of bakery products, cookie and muffin formulations, breakfast mixes, snack foods, restructured meat products, sausage formulation, ethnic entrees, meat emulsion technology, fruit juice beverages and potato products.

Centre staff provided an in-plant technical advisory and consultation service in areas such as: trouble-shooting processing operations, quality assessment (process/product compatability), process/equipment modifications and plant start-up. Specific examples include:

- Centre personnel provided an advisory function to a number of food operations during initial start-up operations. In-plant and custom packaging operations were reviewed.
- Assistance was provided to an Alberta food operation during the installation, operation and subsequent modifications associated with modified atmosphere packaging systems.
- In-plant process audits were conducted upon request of a number of meat processing facilities to further enhance the keeping qualities of Alberta carcass beef.

Staff at the centre maintained close liaison with universities and research centres to complement the needs of industry. Visitors and missions from many parts of the world toured the centre.

Business Analysis Branch

The business analysis branch continued to support the development of a viable agri-industry sector in Alberta by providing professional financial analysis services to specific department programs, and by providing consultative services to new and developing agribusiness firms in the areas of business and financial management.

During the 1985-86 year, the major portion of branch resources was directed to analytical work under the Canada-Alberta Subsidiary Agreement on Nutritive Processing Assistance (NPA).

The NPA program provided assistance to agricultural processors in rural Alberta for expansion, modernizations, and the establishment of new facilities.

The business analysis branch provided the provincial manpower for the evaluation and inspection of NPA projects. During 1985-86, the branch completed evaluations resulting in 65 offers of assistance totalling $3,844,525 on $17,294,569 of projects costs, and completed 90 inspections resulting in disbursements of $4,627,196.

The business analysis branch also provided support to the community services branch by evaluating applications from agricultural societies for assistance on capital expenditures for community projects. For the year ended March 31, 1986 the business analysis branch reviewed 13 proposals resulting in the approval of $608,654 in grant assistance and $365,000 in provincial loan guarantees. Compliance inspections on 26 projects approved in prior years were also completed.

Financial analysis support was also provided to other firms and agencies with regards to individual projects and issues.

Business management support activities included assistance to a number of smaller firms/organizations as well as to other government departments and agencies. More specifically, some of the projects undertaken during the year included:

- counselling to individual firms in the areas of budgeting and control
- input on requests under the Alberta small grain dealers guarantee program
- financial statement analysis relative to financing alternatives and capital investment decision making.

Agricultural Processing Development Branch

During the year, the agricultural processing development branch continued to support Alberta's agricultural and food processing industries. At the beginning of the year, the branch was expanded by the transfer of the processed food development section from the agri-food development branch, which yielded an overall branch complement of eleven professional staff.

Branch operation throughout the year was directed by three sections covering industry development, process engineering development and processed food development. These sections directly supported industry and at the same time maintained a high level of liaison with the market development division and the other four branches of the marketing services division to ensure fully integrated program delivery.

The industry development section worked with private sector investors to facilitate the process of establishing or expanding new processing industries or essential infrastructure. Ongoing investigations were launched into specific food industry opportunities in Alberta such as asceptic packaging and centralized food processing and distribution centres. A contract was negotiated to develop an integrated program for industry development.

A wide range of technical assistance was provided for Alberta processors by the process engineering development section. This assistance covered technology awareness, equipment selection and location, feasibilities and costings. More emphasis was given to evaluating processing opportunities yielding industrial end-products from agricultural raw materials. Ongoing collaborative studies were initiated in regard to a number of these opportunities, including starch production, ethanol production, oats fractionation, wheat germ oil extraction, metallic stearate production and super-critical extraction.

The processed food development section maintained day-to-day support for Alberta's food processors. Professional assistance was directed at packaging and labelling, the development of company marketing plans, development of new and approved product ranges and product identification materials. Companies were sourced for participation in national and international food shows and fairs and were assisted to participate in these. Specialized assistance was prepared in support of Alberta's food industry participation in Expo 86. Ongoing new programs included marketing education seminars for the food manufacturer and development of a packaging and labelling information manual.

Branch emphasis was placed firmly on grassroots company support. Approximately 50 formal company contacts per month were maintained and many more on a day-to-day basis. Grants totalling approximately $826,000 were administered during the year in support of industry's developmental programs.

ASSISTANCE UNDER THE AGRICULTURAL GRANTS ACT PROVIDED TO INDUSTRY IN FISCAL 1985-86

	Number of Grants	Total
Associations	3	$ 420,000.00
Agri-food Processing Companies	85	406,000.00
		$ 826,000.00

APPLICATION OF GRANT ASSISTANCE TO COMPANIES

Industry Development	18%
Product Development	23%
Packaging/Labelling	33%
Product Identification	26%
	100%

Food Laboratory Services Branch

The food laboratory services branch carried out programs to improve quality, safety and nutritional value of Alberta's food, food ingredients and agricultural production at the producer, processor, exporter and consumer levels. The branch, through its laboratories in Edmonton and Airdrie, provided analytical and advisory services of a highly technical nature, to all sectors of the Alberta food industry, hospitals and health care institutions, and various government agencies concerned with food production, animal breeding, processing, quality, safety, nutritional values, inspection, transportation, exports and retail trade.

As a service to Alberta food processors and exporters who sell to domestic or export markets, the food laboratories helped ensure that food products, or ingredients, meet the standards established by the local governments or authorities of the importing countries.

The food laboratories in Edmonton and Airdrie analysed 28,053 random milk samples for the presence of antibiotic residues which can present serious health problems to consumers; only 0.36 per cent of these samples were positive. In addition, 162 samples of meat, honey and other foods were analysed for the presence of antibiotics. Eleven samples of meat contained various levels of antibiotic residues. No antibiotics were detected in any of the 38 honey samples examined.

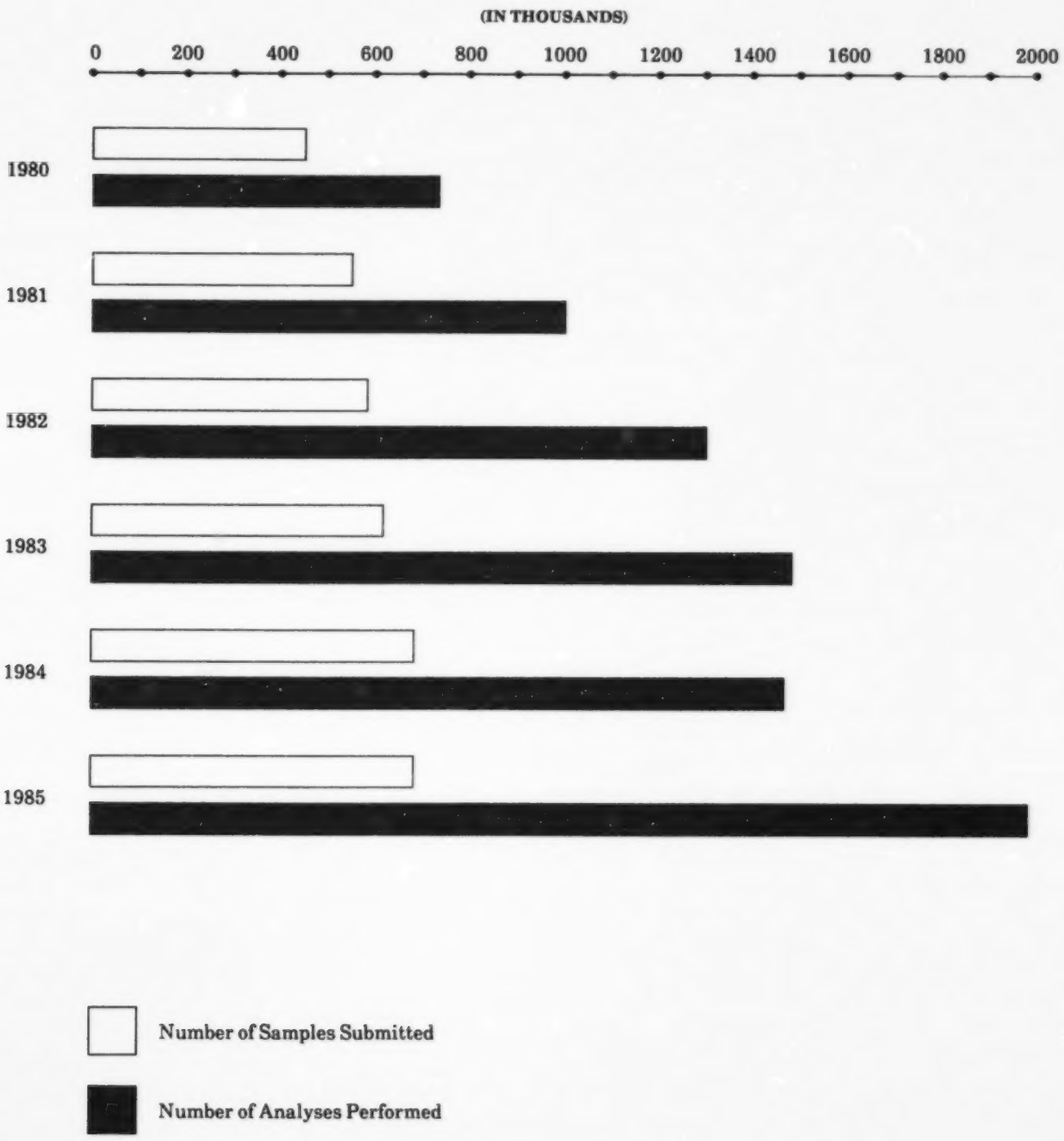
A total of 969 food products were also analysed for the presence of pesticides, herbicides, PCB's and other toxic chemicals. All random samples examined were found to be within the acceptable level.

From April 1, 1985 to March 31, 1986, the food laboratory services branch received 670,929 samples of foods, food ingredients and various other agriculture commodities. A total of 1,972,609 tests were performed on these samples.

The graph illustrates the number of samples submitted and number of analyses performed during the past six years.

The following table indicates the number and type of samples received at the Edmonton and Airdrie laboratories and the number of analyses performed during the 1985/86 fiscal year. The number of samples analysed and number of analyses performed during the previous 12 month period are indicated in brackets.

NUMBER OF SAMPLES SUBMITTED AND NUMBER OF ANALYSES PERFORMED BY THE FOOD LABORATORY SERVICES BRANCH DURING THE PAST SIX YEARS



SAMPLES RECEIVED AND ANALYSES PERFORMED BY THE FOOD LABORATORIES IN EDMONTON AND AIRDRIE APRIL 1, 1985 to MARCH 31, 1986
(figures in brackets are for the previous 12 month period)

	No. of Samples Analysed		No. of Analyses Performed	
Milk and Cream	37,870	(34,024)	176,965	(140,980)
Butter	149	(163)	994	(681)
Cheese	2,298	(2,412)	9.811	(9,685)
Ice Cream	3,633	(4,187)	8,737	(9,874)
Dry Milk	74	(6)	69	(31)
Processing Plant Survey	422	(375)	1,815	(1,345)
Honey	166	(541)	944	(1,913)
Washing and Sanitizing Agents	—	(18)	—	(23)
Water	447	(457)	1,466	(1,501)
Eggs	957	(1,189)	1,753	(2,109)
Meat	1,900	(2,081)	8,400	(10,213)
Vegetables	542	(643)	2,101	(2,358)
Fish and Wildlife	262	(204)	1,226	(843)
Cereal Products and Forage	427	(265)	1,805	(1,163)
Human Specimens	95	(39)	100	(42)
Soil	78	(35)	83	(40)
Research and Collaborative Studies	450	(833)	453	(849)
Miscellaneous Foods	2,473	(2,151)	10,282	(9,050)
Central Milk Testing	618,666	(615,004)	1,745,696	(1,268,191)
TOTALS	670,929	(664,627)	1,972,609	(1,460,891)

NUMBER OF ANALYSES PERFORMED BY THE FOOD LABORATORY SERVICES BRANCH DURING THE PAST SIX YEARS

1980	726,157
1981	1,100,489
1982	1,289,835
1983	1,485,184
1984	1,460,891
1985	1,972,609

NUMBER OF SAMPLES SUBMITTED TO THE FOOD LABORATORY SERVICES BRANCH DURING THE PAST SIX YEARS

1980	463,607
1981	526,111
1982	587,039
1983	617,922
1984	664,627
1985	670,929

MARKET DEVELOPMENT DIVISION

The market development division, responsible for both domestic and international market development, continued to provide consultative and financial assistance to Alberta marketers of agricultural commodities, processed food and feed products and technical services (consulting).

In 1985, Alberta exported approximately $1.7 billion worth of agricultural and food products to other countries. This amount represented 18 per cent of Canada's $9.5 billion total for these products.

The division continued to concentrate its efforts in the area of value-added products. In 1985, meat and animal products accounted for $170 million worth of exports, canola products for $135 million, brewed and distilled grain products for $29 million and flour and milled cereals for $12 million.

During 1985, Alberta remained a significant supplier of export commodities including wheat, barley, canola, cattle, swine, water, animal feeds, hides and skins. Alberta also exported large quantities of peat moss, semen, embryos, forage seeds, honey and malt. Export markets were developed and expanded for cheese, beef jerky and numerous other grocery products.

The division, while servicing the Alberta, North American and overseas markets, emphasized the following markets and commodities in order of priority:

Markets:

- Alberta, British Columbia and Quebec
- Japan
- Pacific Northwest (United States)
- California and other Western United States
- South Korea
- European Economic Community (United Kingdom and West Germany)
- Mexico
- People's Republic of China
- U.S.S.R.
- ASEAN (Association of South East Asian Nations)

Commodities/products:

Meat	- beef, pork, horsemeat, processed meat products
Canola	- oil (refined and crude), meal, seed
Processed food	- flour and pasta, processed vegetables and other grocery products
Livestock	- genetic stock (beef, dairy, horses and swine) - commercial and other livestock
Field crops	- forage seeds, pulses, alfalfa, potatoes, sunflower
Other products	- peat moss, honey, malt, malting barley, hides, offal, dairy products, vegetables, etc.

In 1985, the Alberta food and beverage industry shipped a total of $3.84 billion worth of products to out-of-province destinations.

Services:
The market development division offered financial assistance, market development programs and advice to Alberta companies on market opportunities and methods of marketing commodities, products and consulting services. The division also provided support for consultants who provide transfer of technology and expertise out of Alberta on international development projects, e.g. large agriculture projects (infrastructure, production, processing, storage, transportation, distribution and marketing) and all aspects of rural development.

By emphasizing trade show participation and one-on-one industry contact in selected markets, the division encouraged Alberta companies to explore market opportunities, as well as the sale of technical information and skills. Numerous incoming and outgoing trade missions were arranged and hosted to further facilitate the export trade of Alberta firms.

The Canadian Market

The domestic market remained a high priority for the market development division during 1985-86. The majority of the activity involving food, feed, beef, and beverage producers focused on markets in Alberta, British Columbia, Ontario, and Quebec.

Alberta Agriculture boosted the province's food processing industry with the approval of a $2.1 million three-year promotion and marketing program. The two parts of the program, S.I.M.S. (a strategy for improved market share) and R.A.P.P. (rural agricultural product promotion) were designed to increase sales of Alberta

processed food products in the local market through to the end of 1987-88. The SIMS/RAPP program is a co-operative effort involving the home economics branch, the Alberta Food Processors Association and the market development division.

The Alberta Food Marketing Advisory Committee, reporting to the minister, continued to provide valuable input on ways and means of improving and expanding the agriculture and food processing industry.

Forty Alberta companies participated in ARFEX '85, a major Alberta foodservice trade show, and reported positive sales results. Seventeen potato, vegetable, and greenhouse companies participated in the Canadian Fruit Wholesalers Association trade show in Calgary. This exposure to buyers resulted in new sales.

Alberta's nursery stock growers reported increased sales of $400,000 as a direct result of two buyers tours, a first for the industry. The opportunity for import replacement was identified along with specific market development programs aimed at capturing new sales.

Alberta Agriculture, in co-operation with the Alberta Cattle Commission, organized and carried out a one-day tour and beef merchandising seminar at Lacombe. This activity was intended to help retailers increase fresh beef sales.

A major study of the horse race industry was commissioned to examine opportunities and impediments to the breeding and marketing of Alberta thoroughbreds and standardbreds. Other market development efforts in the horse industry went toward the "Alberta Breeds for the World" presentation and show at Spruce Meadows. Alberta Agriculture continued to encourage breed associations to locate national and international shows in Alberta.

Alberta Agriculture supported the canola crushing industry in its efforts to develop a domestic marketing program for canola meal in western Canada. The department carried out a canola meal usage survey, provided assistance to hire a livestock nutritionist, and met with industry representatives to plan the project.

The market development division maintained an interest in import replacement and new product development. Industry liaison and trade contacts were strengthened, additional market research was conducted, and trade data was purchased from major research firms to help prioritize market opportunities.

During 1985-86 market development efforts in the eastern Canadian marketplace concentrated on beef sales to Quebec and Ontario. Major objectives were to sustain sales in the Quebec marketplace and increase sales to Ontario.

The division supported programs throughout the Canadian market, such as: an Alberta beef promotion with la Ferme Carnaval in Montreal, a major foodservice sales contest for Alberta beef; Alberta beef demonstrations at the Salon-Haute Foodservice Show in Quebec City and the Rendez-vous Show in Montreal; several sales trips for beef processors; and focus group research to evaluate Ontario consumer perceptions of Alberta beef.

The ratio of boxed: carcass beef in Quebec is much lower than in Ontario. To educate and encourage Quebec's retail trade to switch to boxed beef, the market development division prepared a French version of the *Alberta Beef* brochure, produced an *Alberta Beef* film and organized more incoming missions.

The Hostex Foodservice Show in Toronto continued to attract several Alberta food companies, increasing sales by these companies in the Ontario marketplace.

British Columbia continued to be a major market for Alberta's agricultural products. The most important products were processed foods, red meats, livestock, table potatoes, and dehydrated alfalfa. Because Alberta's agricultural and food products complemented, rather than competed with, British Columbia's, strong two-way trade resulted.

Preparations were made to promote Alberta food products at the Alberta pavilion at Expo 86. A concurrent promotion with Canada Safeway's lower mainland stores was also planned in 1985-86.

Alberta Agriculture pursued Canadian livestock markets by participating and supporting the Canadian Western Agribition in Regina and the Royal Winter Fair in Toronto. Agribition was particularly valuable in promotion and sale of Alberta beef breeding stock, while the Toronto Royal provided an avenue to promote all species of livestock, with a particular emphasis on the Alberta horse industry. Both shows promoted Alberta livestock to protential buyers from other Canadian provinces.

United States

The United States continued to be Alberta's largest foreign market for agricultural and food products. Exports to the U.S. in 1985 showed a nine per cent increase over 1984, increasing to $327 million from $300 million.

Promotion of superior genetic beef and dairy stock through the U.S. livestock show program continued. In 1985 Alberta Agriculture, in co-operation with Alberta-Canada All Breeds Association participated at shows in Madison, Billings, Denver and Houston. For the first time, a booth was manned at the National Cattlemen's Association meeting in San Antonio, Texas.

Canada West Trading Company, in co-operation with the market development division, held "Taste of Canada" food product promotions in Spokane, Hawaii, Phoenix, and for the first time in Los Angeles. They featured Alberta pork, beef, processed meats, and a variety of grocery products.

In 1985-86 the market development division participated at the following food shows:

California Grocers Show
Washington State Food Dealers Show
The U.S. International Food Show
The National Food Brokers Show
The Pacific Northwest Hospitality Show
The Arizona Food Show
The Solo Food Show, Minneapolis

The division funded a major trade policy study which reviewed the state of U.S. agriculture in eight key commodity/product sectors, and government policies and programs affecting those sectors.

This study was used to help the department prepare for the Canada/U.S. trade negotiations. Staff were also involved in providing input on market opportunities to the federal/provincial trade policy committee.

The division continued to develop and maintain a good trade relationship with the U.S. A major mission to the state of Alaska led by the deputy minister was undertaken to review the existing Alberta/Alaska O'Donoghue Agreement. Staff met with agriculture departments in the states of Washington, Oregon and California. Staff continued to meet and exchange ideas through the Western Association of State Departments of Agriculture (WASDA) and the Western United States Agricultural Trade Association (WUSATA). A study was also undertaken to further identify the border irritants between Canada and the U.S. on agriculture and food products.

After canola oil was approved for human consumption in the U.S. in January 1985, the division carried out a major market study of potential canola oil sales in the western U.S. Based on this study, a market study was developed with Alberta's canola industry. The first in a series of seminars to provide technical information on canola to key U.S. buyers was also completed.

Attendance at conferences and missions in Oregon, Washington and California continued to promote sales of seed potatoes in those states. Incoming missions to Alberta from those areas were supported.

Alberta forage seeds were marketed through two outgoing forage seed missions to north-central U.S., plus attendance at the International Seed Conference in San Francisco.

The division promoted red meat sales by co-ordinating Alberta meat packer participation at the Western State Meat Association Conference in Oakland, California and through incoming visits of U.S. meat buyers. The division also continued to support the meat packers' marketing programs in the U.S.

Alberta participated in the Far West Horticultural Show in Spokane, Washington and supported an incoming mission of peat moss buyers and distributors.

Pacific Asia

The Pacific Asia region continued to grow significantly in terms of its importance to Alberta's exports of agricultural products. Japan continued to be the number one priority market in the region followed by Korea, People's Republic of China, Southeast Asia and Australia/New Zealand. Many missions, both incoming and outgoing, were organized during the year leading to sales arrangements.

In Japan, Alberta Agriculture established its first overseas position at the Alberta government office in Tokyo. Increased sales of Alberta high quality beef and grocery products in Japan continued to be the top priority during the year. In addition, promotional efforts were made in the areas of pork, dehydrated alfalfa, swine breeding stock and beef and dairy genetics.

Europe, Africa, Middle East

Work continued in Korea on two livestock demonstration projects which resulted in increased interest in Alberta livestock and feed products. Ryeseed exports increased significantly during the year and work continued to convince the Korean government to liberalize the importation of alfalfa products.

A major hotel chain has shown interest in importing prime Alberta beef for distribution throughout Australia. In addition, specific opportunities for exporting food products (cheese, caviar, crackers) were further developed. New Zealand has shown interest in holding a series of Alberta food festivals which would promote unique, high quality Alberta food products. Livestock genetics (semen and embryos) continued to be exported to these two countries and it is anticipated that this area of trade will continue to expand.

Following the success of a hotel promotion of Alberta products in Japan, a similar promotion in Hong Kong was planned. Initial sales of prime Alberta beef, honey and other products have been made to Hong Kong.

China remains a developmental market with good future potential for Alberta producers and consulting services. Considerable effort has been made to identify opportunities and strategies appropriate for Alberta exporters.

Important sales of cattle hides to China occurred in 1985. China continued to be a major export market for Alberta's cattle hides, a result of the activities undertaken in support of the Heilongjiang/Alberta twinning relationship.

Sales possibilities for cattle semen and embryos in China were aggressively pursued with good long term prospects for success. Livestock development, particularly increasing the production of dairy products, plays a more important role in Chinese agriculture than in the past and is accorded high priority.

The Qiqihar rangeland improvement project, which resulted from a joint agreement signed by the Alberta Premier and Minister of Agriculture, and Heilongjiang, Alberta's sister province in China, has been successful.

A 1984 technical mission of canola crushers to Southeast Asia resulted in sales of over $10 million in 1986. Taiwan purchased forage seeds and large volumes of cattle hides during the year.

Dairy/beef genetics, horse meat, deheated mustard powder, honey, leisure riding horses and product consulting services were the focus of most marketing activities in Euope. Emphasis was placed on market diversification, the Soviet Union in particular.

The United Kingdom, Ireland, Scotland and Scandinavian countries remained the best markets for breeding bulls. Germany, Netherlands, the U.K. and the Soviet Union were the best markets for semen. Embryo transfer interests grew as a result of positive trials conducted in Hungary and protocol negotiations with the Russian Republic.

By participating in major food shows in France and Germany, horse meat sales have been added to this major market. Future market entry of these products from Canada will depend upon getting plant inspections approved for the export of both horse and beef meat products.

Leisure horse sales have grown with some 80 horses entering the markets of Germany, France, Italy and Switzerland.

The market for deheated mustard powder continued to grow. With sales established in France, Denmark and Finland, new entries were made into the U.K. and Spain. Alberta honey continued to find acceptance in Europe and this territory has become the major export market for this product.

The highlight of 1985-86 activities was the signing of the Alberta-R.S.F.S.R. (Russian Soviet Federated Socialist Republic) Co-operation Protocol.

Latin America/Caribbean

Principal activities in Latin American/Caribbean were directed towards dairy and beef genetic stock, semen, pulses and canola seed.

Livestock and semen sales to Mexico increased dramatically in 1985-86 with over 1,000 head of purebred beef and dairy cattle exported. Significant sales of canola seed and crude canola oil were made to Mexico, with some purebred swine and semen exported. A new joint venture bull testing program was initiated with the State of Jalisco involving a number of major Alberta livestock breeds.

Mexico remained the major market in this region and the division continued to develop the canola (seed) market by conducting feeding trials. The division also supported Alberta companies in Mexican livestock shows to develop a broader market base for our superior genetics.

The major sales to South America were livestock semen and purebred breeding stock. The division continued to support Alberta suppliers' participation in important South American livestock events.

Forage seed sales have increased to South America with Alberta suppliers shipping to Argentina, Chile and Colombia.

Agricultural Consulting/Technology Transfer

The sale of agricultural technology and technical expertise is a growth area for agricultural exports and one which has long-term benefits for the agriculture industry in Alberta.

This growth market will continue to be fuelled by the demand for agricultural technology and accelerated rural development in such areas of the world as Southeast Asia, Africa, Latin America, the People's Republic of China and the Soviet Union.

The market development division co-operated with the Department of Economic Development and the private sector in organizing a "Special Briefing on Export Opportunities Available Through World Bank Project Financing". This seminar attracted 180 participants and focused on the business opportunities available to Alberta/Canadian suppliers of technology, services and products. It was the first time that many consultants in the agriculture industry had the opportunity to meet and discuss future directions.

Considerable activity and interest was generated in the agricultural industry as a result of this seminar:

- increased requests and support for off-shore missions to follow-up on identified international projects
- formation of consortia with the size and depth of experience and expertise to pursue international agricultural contracts
- more frequent short-listing of Alberta companies by CIDA and the multilateral banks and agencies
- an increase in the number of actual international contracts awarded to Alberta firms.

RURAL DEVELOPMENT

In 1985-86 the Canada-Alberta Subsidiary Agreement on Nutritive Processing Assistance (NPA) was completed. The projects offered assistance over the five years of this program are shown on the following table. Payments made to projects for this period amounted to over $15 million.

On February 1, 1986, a new Canada-Alberta Subsidiary Agreement on Agricultural Processing and Marketing was signed, replacing the NPA program. The agreement provided for a five year, $50 million incentive program to be jointly funded and administered by Alberta Agriculture and the federal Department of Regional Industrial Expansion.

The objectives of this agreement are:

- to enhance the competitiveness of the existing agricultural processing industry in Alberta
- to encourage and facilitate new private sector investment in the agricultural processing industry so

as to further process in Alberta those agricultural, food and related products that have the potential for domestic and export growth or import replacement and which will help diversify Alberta's economic base, improve opportunities for productive employment and thereby promote balanced development throughout Alberta.

This program provides financial incentives for capital projects which include:

- the commercial processing or manufacturing of products of plant or animal origin
- the commercial processing or manufacturing of food products of nutritional value to humans or animals
- the commercial processing or manufacturing of basic pharmaceutical chemicals and other components used in human and veterinary pharmaceutical products, medical diagnostic products, including those produced by biotechnology for consumption or ingestion by humans or animals
- the commercial testing and full-time research related to processed agricultural food products and process development, including related high technology and pilot projects
- the commercial processing or manufacturing of plant or animal genetic material and related products of genetic engineering
- the commercial manufacturing of containers, packages, or labels for the agricultural processing industry.

Financial incentives can also be provided for non-capital projects:

- market and investment analysis
- developing new or improved products or processes
- full-time commercial research and development and pilot projects.

PROJECTS OFFERED SUPPORT 1981-1986

Facility	Number of Projects	Amount
Meat	47	$ 3,946,651
Bakeries	30	456,666
Vegetable	10	404,806
Feedmills	47	2,555,967
Canola	11	3,614,735
Alfalfa	12	1,623,719
Dairy	13	2,045,060
Miscellaneous	36	4,236,838
TOTAL	206	$18,884,442

1985
1986

RESEARCH AND RESOURCE DEVELOPMENT

RESEARCH AND RESOURCE DEVELOPMENT

In 1985-86, the research and resource development sector continued to pursue two major objectives: to strengthen Alberta Agriculture's efforts in maintaining and expanding the province's basic agricultural resources, land and water, and to improve the technological base of Alberta's agriculture industry.

The sector was comprised of the irrigation secretariat and three divisions — research, resource planning, and irrigation and conservation. An additional section, special projects, handled various sector-wide concerns. All of these units conducted activities to help the sector meet the following specific objectives:

- to promote management and conservation techniques among farmers, producer groups and local authorities, in order to achieve better use of land and water resources for sustained agricultural production.
- to provide irrigation project planning, land evaluation and resource analysis support to farm organizations, local authorities and provincial agencies, to assist them in the planning, allocation and development of Alberta's land and water resources, for the long-term benefit of agriculture in the province.
- to support the activities of the province's Irrigation Council in the council's role of administering The Irrigation Act and the irrigation rehabilitation and expansion program.
- to provide financial assistance and administrative support for the department's general research programs, the Alberta Agricultural Research Trust and the Farming for the Future agricultural research program.

RESEARCH DIVISION

In 1985-86, the research division continued to pursue its major objective of improving the technological base of Alberta's agriculture industry. To this end, the division administered research support programs, developed and implemented criteria for evaluating research projects, and disseminated research information. Division staff also co-ordinated research activities across the department, and provided opportunities for employees to upgrade their scientific awareness by participating in research projects.

The largest research grant program managed by the division was Farming for the Future*, for which staff administered more than 300 research and demonstration projects during the year. The division also oversaw disbursements from the Alberta Agriculture Research Fund, which in 1985-86 supported four studies conducted by department staff and private research organizations. These projects included an evaluation of small-scale wind turbines for pumping water and an analysis of canola meal as a protein supplement in swine rations.

During the year, the research division performed a number of administrative functions for the Alberta Agricultural Research Trust, which was established in 1966 to support agriculture-related studies conducted at academic institutions in the province. In 1985-86, 30 such projects received grants from the Trust.

In addition to providing various services to the 16 decision and policy-making bodies of Farming for the Future, employees of the division were involved with a number of departmental, provincial, and national research-related committees and councils in 1985-86.

*A more detailed and comprehensive annual progress report on Farming for the Future activities is provided annually to the Legislature through the Minister of Agriculture.

This involvement included the provision of secretarial services to the Alberta Agricultural Coordinating Committee (AACC), and co-ordination of the activities of the AACC's 14 advisory committees. Division staff also represented the AACC in the Canadian Agricultural Research Council, and participated on the council's inventory committee. In addition, the division worked closely with the University of Alberta during the year in developing a plan for capital facilities at that institution. The division's association with all these organizations was aimed at ensuring effective integration of Alberta Agriculture's research activities, and at maximizing the exchange of research findings within and between the department and other agencies.

In 1985-86, at the request of the Treasury Board, the research division began a comprehensive review of agricultural research programs, technology transfer efforts, and research needs in Alberta. The findings of this review will be used by the department to develop an integrated strategy for agricultural research and development in the province. The plan, which is to be completed in 1986-87, will be used by the Treasury Board to facilitate research funding decisions.

In addition, in 1985-86 division staff formulated and implemented guidelines for research and development activities supported by Alberta Agriculture and conducted both inside and outside the department. These guidelines were designed to promote greater understanding of the roles of department branches involved in research, and to increase co-operation and co-ordination in research management. The new policy was approved by the Minister of Agriculture in October 1985.

Farming for the Future

Farming for the Future was established as an Alberta Heritage Savings Trust Fund project in 1977 with the broad objective of improving net farm income and the long-term viability of Alberta's agriculture sector. Administered by the research division for the Agricultural Research Council of Alberta, the program pursues its objectives by supporting research and demonstration projects beneficial to the farming community.

In 1985-86, Farming for the Future completed the second year of its current three-year mandate. During the year, the research program, the larger of Farming for the Future's two funding vehicles, supported 103 basic and applied research projects with grants totalling $4.8 million. This funding raised the total expenditures of the research program to more than $33 million since the start of its first mandate in 1979.

The second subprogram of Farming for the Future, the on-farm demonstration program, is designed to speed the transfer of technology from the laboratory to the farming community. To this end, $358,170 was awarded under the program in 1985-86 to support 117 demonstration projects conducted by producers and Alberta Agriculture staff.

The fiscal year saw a number of significant policy changes for Farming for the Future. In keeping with the government's objective of diversifying the provincial economy, greater emphasis was placed on projects relating to secondary agricultural industries. In addition, a substantially greater number of studies conducted by private industry were funded in order to enhance Alberta's research resource base. Finally, it was decided to focus greater efforts on short-term projects which offer more immediate benefits to the agriculture industry, and place less emphasis on funding studies of indefinite duration.

On March 11 and 12, 1986, the second Farming for the Future research conference was held in Edmonton. The conference once again provided a forum for discussion of research projects and policy and featured presentations by program participants. It was attended by members of the farming community and representatives of producer organizations, universities, private industry, and the public sector.

To encourage communication between scientists in Alberta and those elsewhere in Canada and abroad, Farming for the Future supported two major international conferences on agricultural technology in 1985-86. A total of $14,000 was granted to these events.

To promote public awareness of program activities, two articles describing research and demonstration projects were issued as inserts in *Country Guide* magazine during the year. Two collections of final reports from on-farm demonstrations were also issued in bound form, and a videotape describing the on-farm demonstration program was produced. In addition, the *Farming for the Future Progress Report 1985*, which covered the operating year 1984-85, was published and distributed.

RESOURCE PLANNING DIVISION

In 1985-86, the resource planning division continued to support planning activities related to the allocation, development, management and conservation of Alberta's land and water resources for the long-term benefit of the agriculture sector.

In particular, the resources of the division were directed at providing support to:

- the review of the Environment Council of Alberta's report and recommendations on maintaining and expanding the agricultural land base in Alberta.
- the development of input to the Alberta Water Resources Commission, which held public hearings on the management of water resources within the South Saskatchewan River Basin.
- the development of a provincial response to the Pearse Inquiry on federal water policy.

Major divisional activities conducted in 1985-86 included: the management of two significant inventory studies on drainage and irrigation for the Alberta Water Resources Commission; co-ordination of the interdepartmental agricultural land base study; and helping to organize the session on land, soil and water resources at the conference "Second Century — Opportunities for Agriculture".

During the year, division support helped the Irrigation Council and the 13 irrigation districts complete general rehabilitation plans which will assist in guiding the on-going rehabilitation and expansion of irrigation delivery systems. Preliminary feasibility studies for irrigation development were initiated in the Fort Macleod and north Foremost areas. A financial assistance program was also implemented to help small irrigation districts convert to using private sector engineering services.

Other significant activities in 1985-86 included a review of several wildlife habitat initiatives. Discussions were also initiated to reduce the financial burden of wildlife crop damage on producers through an improved compensation program. In addition, to enhance the sector's ability to respond effectively to client needs, development work was begun on automating the handling of agricultural land and water resource development information.

Division activities were carried out by three branches: land use, land classification and project planning.

Land Use Branch

During 1985-86, the land use branch continued to provide leadership in the development and co-ordination of departmental and interdepartmental programs and policies involving both public and private land use planning, water resource management planning, land reclamation and general resource inventory.

The land use branch provided staff support to the agricultural land base study, a major interdepartmental study of the land and water resource development options available for agricultural production. The study included analyses of the potential physical and economic impacts of the development options. During the year, branch staff also participated in preparing an inventory of Alberta's drainage requirements.

The computerized soil inventory database for management and planning (SIDMAP) system project, a joint effort of Alberta Agriculture and Agriculture Canada, continued in its second year to provide land resource data to clients in government, university and private industry. SIDMAP data was used in program evaluation, resource inventory and land evaluation both on a provincial and on a regional basis.

The land use branch, in conjunction with the Alberta Research Council, initiated a geographic information system pilot project to demonstrate the use and application of automated mapping. This project also helped clarify the department's requirements for participating in the development of a provincial natural resource information system.

Two land use planning projects were initiated in 1985-86: a rural land use monitoring program to assess the ongoing losses and gains of agricultural land in the province, and a study of the impact on agriculture of small landholdings of between 10 and 80 acres.

During the year the branch helped to initiate and co-ordinate economic research related to land and water resource management and planning. Work was begun on determining viable on-farm soil conservation management practices and on assessing the risk factors associated with irrigation development.

In 1985-86, branch staff were also involved in interdepartmental committee work related to a number of subjects, including the integrated resource planning process, water management planning, development of a land capability classification system, land reclamation, agricultural development on native lands, and evaluation of peatlands development.

The following referrals were handled by the branch in 1985-86:

Pipelines	26
Electrical transmission lines	34
Environmental impact assessments	7
Annexations	18
Sanitary landfills	25

Land Classification Branch

In 1985-86, the land classification branch continued to pursue its mandate to carry out, supervise and co-ordinate all land irrigability classifications in Alberta.

Drought conditions experienced during the year helped create an unusually heavy demand for land classification from producers wishing to be serviced by the irrigation districts. In total, 949 land classification requests were received and 488 were completed.

On behalf of the Alberta Water Resources Commission, the branch contracted out the classification of the irrigability of 418,000 acres in southern Alberta. The classification of an additional 93,000 acres adjacent to the Three Rivers Reservoir were contracted out on behalf of Alberta Environment.

Exploratory land classification was carried out on 70,000 acres in the Mountain View, Aetna and Leavitt Irrigation Districts and on 159,000 acres in the Eastern Irrigation District. These studies identified areas requiring more detailed investigation. A grant was provided to the Alberta Research Council to support soil surveys of nearly half-a-million acres in Flagstaff County.

The soils laboratory, located in Lethbridge, analysed or contracted out the analysis of approximately 28,000 soil and water samples. Staff assisted the Prairie Farm Rehabilitiation Administration (PFRA) in sample preparation and quality control. Development of and monitoring quality control in private laboratories were important functions for soils laboratory staff during the year.

In 1985-86, saline and wetland maps were prepared for 541,000 acres in the Eastern Irrigation District. A color composite land irrigability map was also prepared for the Eastern Irrigation District.

The branch continued to emphasize land classification related research; staff studied the irrigability of solonetzic, shallow bedrock and coarse textured soils and the reclamation of saline areas.

Project Planning Branch

In 1985-86, the project planning branch continued to support the Irrigation Council by providing technical assistance, advisory services, research, and project evaluation and monitoring services for irrigation rehabilitation and expansion projects conducted by the province's 13 irrigation districts.

During the year, branch staff assisted the irrigation districts in finalizing their general rehabilitation plans. An executive summary of these plans was prepared for the Irrigation Council. Feasibility studies for three storage reservoirs and 14 system projects were also completed.

In support of Alberta Environment's Oldman River Dam mitigation studies, the branch prepared a major irrigation feasibility report. Cost estimates were prepared for 16 alternative irrigation development schemes surrounding the Three Rivers Reservoir in the Municipal District of Pincher Creek.

A review of the design criteria standards presently used in the rehabilitation and expansion program for the sizing of irrigation canals was completed by the branch in co-operation with the St. Mary River Irrigation District.

Increased emphasis was placed on extension education, research and evaluation studies aimed at improving seepage control measures, irrigation efficiency, water management, land reclamation and the effective operation of irrigation distribution systems. Topics under study included: deflections in buried irrigation pipelines; water conveyance efficiency; flow metering and structure calibration; and the effects of groundwater, frost penetration and cracking on concrete lined canals.

A scale model of a water-powered cleaning device for irrigation pipeline trash screens was built in co-operation with the Lethbridge Community College hydraulic lab, and testing of the model was initiated. A co-operative study of the automation of downstream water control in small irrigation canals was implemented.

Studies comparing the effectiveness of pressurized pipelines versus concrete-lined canal systems were continued in 1985-86. Exposed lining materials, including reinforced concrete, were monitored and evaluated for effectiveness and durability.

On behalf of the Irrigation Council, 60 proposals for irrigation rehabilitation and expansion projects were evaluated and the construction of 116 projects was monitored; 241 right-of-way easements and appraisals were also completed for the irrigation districts.

As part of the effort to privatize the engineering design and construction supervision services of the branch, financial assistance was provided to three of the smaller irrigation districts.

Assistance was provided to Alberta Environment, the Alberta Water Resources Commission, other government agencies and the private sector in the use of the branch's aerial photo mapping data bank. Special projects of the mapping program included contour mapping of north Foremost, Lake Newell East and Sherburne Reservoir.

In co-operation with the Lethbridge Community College and the Alberta Irrigation Projects Association, the ditchrider training course was reformatted and presented at both a beginning and an advanced level. A technical conference and two seminars were conducted for irrigation district staff.

The *Water Haulers Bulletin*, a newsletter presenting research results, information on new materials and construction methods, and other matters of interest to the irrigation industry, continued to be published by the branch and distributed quarterly to approximately 400 readers.

IRRIGATION AND CONSERVATION DIVISION

In 1985-86 the irrigation and conservation division continued to provide farmers and agricultural agencies with programs and services assisting in soil and water management and conservation. This was consistent with the department's objective of ensuring that Alberta's land, soil and water resources were efficiently managed both for present use and for the long-term interests of the agricultural industry.

The division's programs were carried out by three branches:

Conservation and development branch — in its second year of operation, this branch developed, promoted and implemented on-farm soil and water conservation and management technology. Farmer and agency subscription to the branch's programs showed a significant increase over the level achieved the preceding year.

Drainage branch — provided technical expertise in on-farm subsurface drainage, seepage control and groundwater analysis. Branch staff continued to consult with irrigation districts on rehabilitation projects and the management of various research projects.

Irrigation branch — assisted with the development, implementation and maintenance of functional and efficient on-farm irrigation systems and with the provision of irrigation management technology to producers and suppliers. The major areas of activity were farm irrigation system upgrading and consultation on crop irrigation management programs.

During the year, division staff participated in a number of reviews and studies of land, soil and water resource management and utilization. Major projects included the interdepartmental land base study, the province's submission to the Pearse Inquiry on federal water policy, and participation in and preparation of Alberta's submission to the federal task force on soil and water conservation and development. The division also supplied information and recommendations to the Alberta Water Resources Commission and to the Prairie Farm Rehabilitation Administration (PFRA) on irrigation development and drought control.

In 1985-86, division staff were involved in several conferences dealing with soil conservation and irrigation management. Staff's primary role at these conferences was to provide guidance and technical information to producers and project managers.

During the year, the division worked with the PFRA to establish a joint soil conservation management committee. The division also extended the dryland salinity investigation service (DSIS) in order to provide service on a province-wide basis. The DSIS was administered jointly with the PFRA, and was implemented through agricultural service boards.

Abnormally dry conditions prevailed for a third consecutive year throughout much of the province. The 1985 drought further encouraged producer interest in irrigation development. In central and northern regions, interest also continued to increase in surface drainage and the soil conservation area program (SCAP). Guidelines were completed, in conjunction with Alberta Environment, for an on-farm water management program which was implemented in April 1985. The program, called the farmland development and reclamation program (FDRP), received 290 applications from 51 co-operating municipalities in 1985-86.

During the year, division staff continuously monitored drought conditions, and played a key role in Alberta's interdepartmental drought committee. In co-operation with Alberta Atmospheric Environment Services, a 24-hour phone-in agricultural weather forecast service was operated throughout the growing season.

The demand for and provision of technical assistance to farmers reached a high level in 1985-86. Producer requests for soil conservation services, including assessment of irrigation feasibility and system performance and investigation of dryland salinity, showed marked increases. Research and demonstration projects were conducted at a normal level.

In 1985, assessed acreage in the province's 13 irrigation districts increased by 19,556 acres to total 1,143,349 acres, of which 1,031,231 acres were actually irrigated during the year. As in 1984, 'under-irrigation' was frequent, due to system and water supply limitations.

The province's irrigation rehabilitation and expansion program continued to have a substantial impact on the ability of the irrigation districts to service water users. Key improvements in 1985 included the addition of the Badger Lake and Crawling Valley Reservoirs in the Bow River and Eastern Irrigation Districts respectively, and the upgrading of Keho Reservoir in the Lethbridge Northern Irrigation District. Very high river flows, resulting from fall rains and run-off, assisted the filling

of new and existing irrigation reservoirs for the 1986 growing season.

Conservation and Development Branch

During the year, the conservation and development branch pursued its objectives of developing, promoting, and transferring on-farm soil and water conservation and management technology to Alberta's agriculture industry.

Technology transfer was a major focus of branch activities. Staff provided information on soil conservation and farm water management to a variety of audiences through participating in producer meetings, publishing factsheets, newsletters and scientific articles, and preparing short courses. Where possible, applied research projects were performed as demonstration projects to facilitate technology transfer.

In 1985, the conservation and development branch chaired the drought monitoring committee, which was established to keep government and senior officials informed of crop and water supply conditions. This committee also co-ordinated the drought-response activities of several agencies, including Alberta Agriculture, Alberta Environment, and the Prairie Farm Rehabilitation Administration (PFRA).

Promoting effective soil management and developing soil conservation awareness programs were major activities for branch staff in 1985-86. Initiatives included the preparation of "On-Farm Water Management" and "Conservation Farming" posters. The branch helped produce Alberta Agriculture's fourth soil conservation film, *Salt Woes*, during the year. The film outlined dryland salinity problems and control methods.

Serious wind erosion occurred in south-central and southern Alberta in 1985-86. More than one million acres were affected. Serious erosion (20 to 50 tons/acre) occurred on approximately 300,000 acres, and very serious erosion (100 tons/acre) occurred on approximately 40,000 acres. Branch staff worked with municipal staff to implement emergency erosion controls. Several municipalities implemented emergency control procedures through enforcement of The Soil Conservation Act.

In 1985-86, branch staff continued to assist agricultural service boards by providing technical, design, planning and approval assistance for conservation projects funded under the soil conservation area program (SCAP), and the new farmland development and reclamation program (FDRP).

In total, 168 SCAP applications were received from 44 municipalities: 112 for water erosion; 34 for wind erosion; 22 for salinity. A total of 51 municipalities submitted 291 FDRP applications in the following areas: 134 for on-farm drainage; 92 for on-farm channel improvement; 65 for slough consolidation. In addition to these projects, the branch provided assistance to more than 300 projects pending from previous years.

During the year, the branch also carried out inspections and engineering surveys, and provided design and technical assistance to local authorities to facilitate planning of agricultural service board projects. Related activities included development and presentation of training sessions for agricultural fieldmen, promotion and assistance with on-farm demonstrations, and initiation of research and development projects concerning grassed waterways, erosion prevention and control, conservation tillage, and on-farm water management.

The dryland salinity investigation service (DSIS) was implemented in April 1985. This was a joint effort of the conservation and development branch and the PFRA, in co-operation with the Dryland Salinity Control Association. Branch staff carried out 56 detailed investigations through the DSIS. Demand for the service was province-wide.

Two dryland salinity hydrogeological studies were in progress and two vegetative control projects were initiated during the year. Applied research projects designed to enhance understanding of salinity encroachment, to develop a new salinity control method, and to provide a method of rapid, in-field salinity measurement were also undertaken.

In co-operation with Environment Canada, the branch initiated a pilot project on farm weather forecasting as part of the climate and weather information program. Telephone lines were established in Grande Prairie, Edmonton, Calgary and Lethbridge, and were open 24 hours per day, seven days per week during the cropping season. 54,380 calls were received from across the province. The branch continued to publish the *AgWx Bulletin*, and work continued on the provincial agroclimate rating system and the preparation of an Alberta climate atlas.

In 1985-86, the branch continued to develop a more co-ordinated and comprehensive approach to on-farm water management, in conjunction with Alberta Environment.

Development of more complete information regarding conservation and storage of natural precipitation continued to be a major focus of branch activities. Precipitation probability information was prepared for 78 Alberta locations to assist in on-farm water management and fertility planning. Two approaches to precipitation conservation, snow management and mini reservoir tillage demonstrated sufficient potential to warrant field testing. Work continued on developing a rapid and more effective way to measure soil moisture. The provincial fall stubble moisture map was prepared and distributed to producers and producer groups.

Water quality in the Verdigris and Etzikom Coulee systems was monitored for the second year. Recommendations developed from the first year's study assisted the St. Mary River Irrigation District to make significant improvement in the water quality of the Verdigris system. The Etzikom system proved more difficult to manage, as the system depends on spill and waste water for supply.

Applied research remained a branch priority in 1985-86. Staff were involved in more than 35 research, development and demonstration projects throughout the province. Project topics included soil salinity, irrigation water, moisture and on-farm water management, erosion control and soil conservation. Study topics for dryland crop production included moisture and fertility retention and the elimination of fallow by direct seeding of winter wheat into stubble.

Committee participation and liaison with other departments and agencies were major branch activities in 1985-86. Staff emphasized integration and co-ordination of programs, activities and resource use with Alberta Environment and the Prairie Farm Rehabilitation Administration, and were active participants in various research committees, including the land resources and engineering program committee of Farming for the Future.

Irrigation Branch

In 1985-86, the irrigation branch continued to assist farmers and various agencies in developing and managing soil and water resources to improve the efficiency and productivity of irrigated agriculture.

Although overall program and activity levels during the year were similar to those in 1984-85, activity in the areas of consultation and field testing or evaluation increased significantly. Difficult economic conditions led an increased number of individuals to seek information regarding irrigation system development and purchase proposals. A considerable portion of this demand originated outside the organized irrigation districts in more remote areas of the province.

In general, the branch placed increased emphasis in 1985-86 on individual project consultation and on the completeness of reporting and documentation of producer inquiries. This served to better inform water users of the full range of alternatives available to them and of the many considerations involved in choosing the irrigation system best suited to their needs.

The installation of new irrigation systems continued to decline. Producers did, however, require significant staff assistance with system conversions and upgradings. Most of these concerned converting from internal conbustion powered pumps to three-phase electrically driven pumps.

During the year there was a slight increase in land development work for surface irrigation. Moderate demand continued for surface drainage assistance, particularly on recently developed irrigation lands, where ongoing drainage problems became more significant following the commencement of irrigation.

Interest in subsurface drainage investigations continued at a moderate level, though few subsurface drainage installations were actually carried out. This was due in some cases to difficulty in achieving outlets, and in other cases to difficulty in determining responsibility for costs.

The Alberta irrigation management program operated at capacity in 1985-86, with producer interest at its highest level ever. Water licensing requests decreased, however, as a result of moratoriums and restrictions on new irrigation placed on the Oldman and Milk Rivers.

During the year, staff involvement in investigations and designs associated with irrigation district works decreased. However, irrigation specialists continued to play a role in co-ordinating on-farm developments with irrigation capital works projects.

Branch special projects in 1985-86 included the continuation of water quality monitoring on the Verdigris and Etzikom Coulee developments, in co-operation with the conservation and development branch.

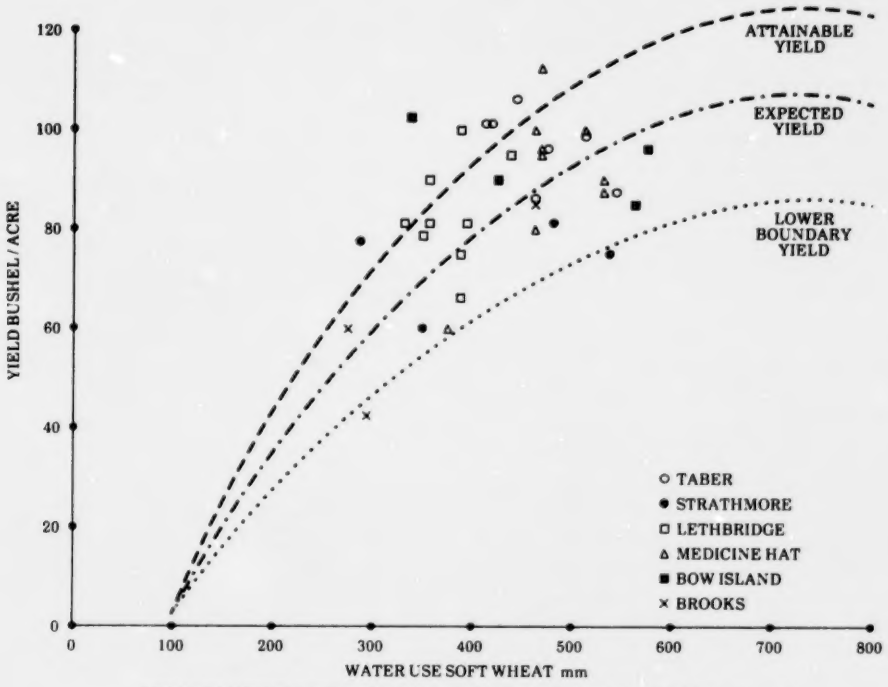
Considerable time was spent in the area of irrigation systems, updating design guides, obtaining and distributing technical catalogues, and assisting irrigation specialists with specific design advice for surface, sprinkler and trickle systems. Significant interest was shown in trickle irrigation systems for fruit orchards in central Alberta and the Peace River region.

The pump testing program was continued in 1985-86; 36 individual tests were carried out in branch specialist areas. Single sprinkler tests, trickle system monitoring and orchard evaluation were conducted at the Lethbridge Gaol plots.

Considerable time and effort were spent during the year working with natural gas and electrical utilities on government grant programs involving irrigation pumping. In addition, branch staff provided considerable input to sector proposals for land information and graphics computer systems.

Despite limited rainfall during the crop growing season and generally poor harvest conditions across the province, irrigation farmers harvested crops that were well above average in both quality and quantity. With poor market prices and increased operating costs, irrigation farmers had to pay closer attention to soil moisture and crop growing conditions in order to achieve maximum yields.

The following graph shows the yields of soft white spring wheat obtained by irrigation farmers in southern Alberta.



RELATIONSHIP BETWEEN WATER USE AND YIELD OF SOFT WHEAT

IRRIGATION BRANCH 1979-86 COMPARATIVE STATISTICS

	79-80	80-81	81-82	82-83	83-84	84-85	85-86
Acres of land levelled	3,785	4,516	3,175	3,262	3,513	1,992	3,021
Sprinkler systems investigated	573	406	420	560	640	721	911
Water license feasibility reports	117	87	112	99	142	133	187
Irrigation management participants	160	185	220	213	181	158	170
Subsurface drainage investigations	—	39	29	32	161	103	175
Pump tests	—	—	45	41	42	60	36

Drainage Branch

In 1985-86, the drainage branch focused on the general objective of identifying and developing practical, economical methods of controlling and reclaiming saline and waterlogged soils throughout the province. Major program areas included: subsurface drainage for control and reclamation of saline and waterlogged lands; evaluation of groundwater flow related to irrigation feasibility, dryland salinity and surface water quality; development of measures to prevent and control irrigation canal seepage; and evaluation and testing of wind turbines in the pumping of water for agricultural purposes.

Significant progress was made in the area of subsurface drainage through the planning and implementation of a large-scale subsurface drainage project near Bow Island. The project involved the installation of approximately 200,000 to 250,000 feet of drain tubing on approximately 400 acres of farmers' land, to control salinity and waterlogging problems caused by seepage from the St. Mary River Irrigation District (SMRID) main canal system. This project, the largest single on-farm subsurface drainage project undertaken in Alberta, was scheduled for completion in September 1986.

During the year, the branch continued to conduct applied research related to subsurface drainage. Projects designed to evaluate the differences in drainage of dryland saline areas and irrigated saline areas were started in the Horsefly basin of the SMRID. A Farming for the Future study, conducted jointly with the conservation and development branch, was initiated near Viking, to determine the causes of dryland salinity and to evaluate different control methods, such as subsurface drainage and continuous cropping.

In the Rycroft area, the drainage branch co-ordinated a research study to evaluate the potential of draining on-farm sloughs and consolidating the drainage water into constructed storage ponds. At the site, wildlife biologists designed a pond for use by various waterfowl and as a put-and-take fishery. It was demonstrated that this combination of drainage and multiuse storage reservoirs may be a practical and economical alternative to the traditional drainage of sloughs and pothole areas into off-farm constructed ditches.

The branch continued to conduct a major groundwater research project in the Milk River basin in 1985-86. The study, designed to assess the effects of proposed irrigation expansion on the Milk River and the Milk River aquifer, attracted the attention of the International Atomic Energy Agency which conducted pilot research on assessing the use of radioisotopes to age-date old (more than 500,000 years) groundwater.

During the year, the drainage branch continued to place a high priority on extension activities. Projects included the presentation of a two-week course on subsurface drainage to representatives of provincial and national agencies involved in drainage activities. In addition, the branch made presentations at seminars, short courses and conferences held throughout Alberta, including the annual "Farming for the Future" conference.

In 1985-86, there were approximately 700 subsurface drainage projects underway in the province. A province-wide survey conducted during the year indicated that more than 90 per cent of farmers using subsurface drainage systems to control salinity and/or waterlogging were satisfied with their projects.

Branch service programs assisting farmers, irrigation districts and other government departments with soil and groundwater problems were continued in 1985-86. Activities included: participation in the interdepartmental steering committee evaluating drainage potential throughout Alberta; assistance to Energy and Natural Resources in evaluating wildlife habitat areas in the Lethbridge Northern and St. Mary River Irrigation Districts; design and installation of subsurface drainage for Alberta Environment adjacent to the Lethbridge Northern Irrigation District and the SMRID main canal systems; and assistance to Alberta Environment and the SMRID on the main canal rehabilitation program.

IRRIGATION SECRETARIAT

The legislative authority for the Irrigation Council and the irrigation secretariat is the Irrigation Act, which states in part, "There shall be an Irrigation Council consisting of not less than seven members appointed during pleasure by the Lieutenant Governor in Council", and that "There shall be an Irrigation Secretariat consisting of one or more employees of the Department of Agriculture designated by the Minister. The Irrigation Secretariat is responsible to the Council and shall carry out its functions and duties under the direction and supervision of the Council".

In 1985-86, the objectives of the Irrigation Council were to effect a sound irrigation policy for the province and to act as an advisory body on irrigation to the Minister of Agriculture. Duties as outlined in the Irrigation Act included approval of additions or deletions of land to or from irrigation districts; approval of district borrowing and rate by-laws and budgets; and approval of any expenditure for moneys received by an irrigation district to finance the rehabilitation of its works under an agreement with the federal or provincial government or a local authority.

A five-year, $150 million extension to the irrigation rehabilitation and expansion program commenced in 1985-86. The objective of the program was to rehabilitate and modernize irrigation distribution systems in Alberta. Its specific aims were to assure irrigation users an efficient, adequate and reliable water supply, to allow for increases in irrigated acreage as water supplies permitted, and to reduce or eliminate canal seepage.

During the year, the council administered cost-sharing agreements with the 13 irrigation districts requiring a total expenditure of $29,800,000 from the Alberta Heritage Savings Trust Fund. The council approved 52 project reports and addendums submitted under the irrigation cost sharing agreement with a total estimated construction value of $36,000,000.

In 1985-86, the council also approved expenditures of $122,000 under the irrigation rehabilitation and expansion research program. These funds were used to support research projects on monitoring of solonetzic soils, a shallow bedrock study and a land reclamation study. The results of these studies may provide data for verifying or modifying the province's Land Classification Standards. To improve the operation of irrigation systems, funds were also approved for research projects on downstream control of automated structures and computer simulation of the operation of a district main canal.

In addition to its involvement with the rehabilitation and rehabilitation research programs, the Irrigation Council, in its role as the irrigation program committee for the Agricultural Research Council of Alberta, recommended five project proposals for funding by Farming for the Future in 1986-87.

The council approved the net addition of 4,496 acres to the irrigation districts' assessment rolls in 1985-86.

During the year the council toured the 13 irrigation districts, and met with the board of directors of each district to discuss matters of mutual concern. A special tour of the Western Irrigation District was also held.

In addition, the Irrigation Council held 17 meetings, including two research meetings and a special meeting with the Alberta Water Resources Commission. At this meeting the council provided the commission with input on the irrigation rehabilitation and expansion program as well as on overall water management as it pertains to irrigation farmers and irrigation districts.

1985
1986
APPENDIX

APPENDIX

Acts Administered by Alberta Agriculture

Agricultural Development Act
Agricultural Pests Act
Agricultural Service Board Act
Agricultural Societies Act
Agrologists Act
Alberta Agricultural Research Trust Act
Animal Protection Act
Artificial Insemination of Domestic Animals Act
Bee Act
Beet Lien Act
Brand Act
Crop Liens Priorities Act
Crop Payments Act
Crop Payments (Irrigated Land Sales) Act
Dairy Board Act
Dairy Industry Act
Department of Agriculture Act
Farm Implement Act
Feeder Associations Guarantee Act
Fur Farms Act
Hail and Crop Insurance Act
Harvesting Liens Act
Horned Cattle Purchases Act
Irrigation Act
Irrigation Land Manager Act
Line Fence Act
Livery Stable Keepers Act
Livestock Brand Inspection Act
Livestock Diseases Act
Livestock Injury Act
Livestock and Livestock Products Act
Margarine Act
Marketing of Agricultural Products Act
Meat Inspection Act
Seed-control Areas Act
Seed Grain Purchase Act
Soil Conservation Act
Stray Animals Act
Surface Rights Act
Threshers' Lien Act
Vegetable Sales (Alberta) Act
Veterinary Profession Act
Weed Control Act
Wheat Board Money Trust Act

ALBERTA LEGISLATURE

OFFICE OF THE AUDITOR GENERAL

AUDITOR'S REPORT

To the Minister of Agriculture

I have examined the balance sheet of the Wheat Board Money Trust Account as at March 31, 1986 and the statement of revenue, expenditure and unexpended funds for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Trust Account as at March 31, 1986 and the results of its operations for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Donald D. Salmon

C.A.
Auditor General

Edmonton, Alberta
June 27, 1986

WHEAT BOARD MONEY TRUST ACCOUNT

The Board of Trustees met on November 8th, 1985 and awarded scholarships and bursaries as follows:

Fairview College	$2400.00
Lakeland College	$2400.00
Olds College, Olds	$2400.00
Lethbridge Community College, Lethbridge	$2400.00
Provincial 4-H Council	$2800.00
Total	$12,400.00

Recipients of individual awards were determined by each college and 4-H Council based on criteria which includes pursuit of agricultural studies.

Balance Sheet as at March 31, 1986

ASSETS	**1986**	**1985**
Cash	$ 72,915	$ 74,324
Accrued interest	1,420	1,424
Investments (Note 2)	52,984	52,981
	$127,319	$128,729
UNEXPENDED FUNDS		
Unexpended funds	$127,319	$128,729

Statement of Revenue, Expenditure and Unexpended Funds for the Year Ended March 31, 1986

REVENUE	1986	1985
Interest and amortization of discounts	$ 10,590	$ 11,830
EXPENDITURE		
Scholarships and bursaries	12,000	12,400
Excess of expenditure over revenue	1,410	570
Unexpended funds at beginning of year	128,729	129,299
Unexpended funds at end of year	$127,319	$128,729

Notes to the Financial Statements as at March 31, 1986

Note 1 **Authority**
The Wheat Board Money Trust Account operates under the authority of the Wheat Board Money Trust Act, Chapter W-7, Revised Statutes of Alberta 1980.

Note 2 **Investments**
Investments consist of the following:

	1986		1985	
	Amortized Cost	**Market Value**	**Amortized Cost**	**Market Value**
Debentures:				
Province of Alberta, guaranteed	$52,984	45,370	$52,981	$39,146

Note 3 **Changes in Financial Position**
A statement of changes in financial position is not provided as disclosure in these financial statements is considered to be adequate.

Note 4 **Approval of Financial Statements**
These financial statements have been approved by management.